

**DOCKETED**

<b>Docket Number:</b>	19-BUSMTG-01
<b>Project Title:</b>	2019 Business Meeting Transcripts
<b>TN #:</b>	230748
<b>Document Title:</b>	Transcript of 11-13-2019 Business Meeting
<b>Description:</b>	N/A
<b>Filer:</b>	Cody Goldthrite
<b>Organization:</b>	California Energy Commission
<b>Submitter Role:</b>	Commission Staff
<b>Submission Date:</b>	11/15/2019 3:08:18 PM
<b>Docketed Date:</b>	11/15/2019



Reported by:  
Peter Petty

APPEARANCES

Commissioners

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

Staff Present: (\* Via WebEx)

Drew Bohan, Executive Director  
Le-Quyen Nguyen, Chief of Staff  
Darcie Houck, Chief Counsel  
Lisa DeCarlo, Staff Counsel  
Cory Irish, Chief Counsel's Office  
Noemi Gallardo, Public Advisor  
Rosemary Avalos, Public Advisor's Office  
Lindsay Buckley, Director of Communications &  
External Affairs  
Peter Strait, Project Manager  
Cody Goldthrite, Secretariat

	Agenda Item
Paul Jacobs	2
Justin Cochran	3
Laurie ten Hope	3
Terra Weeks	4
Patrick Saxton	5
Lisa De Carlo	5
Bill Pennington	6
Matt Chalmers	6
Christopher Meyer	6
Karen Herter	7
Jeff Miller	8
Hally Cahssai	9
Paul Deaver	10
Jared Babula	11

APPEARANCES (CONT.)

Others Present (\* Via WebEx)

<u>Interested Parties</u>	Agenda Item
Ali	2
Linda Warren Healey	2
Rob Oglesby	2
Tim Tutt, Sacramento Municipal Utilities District	6
District (SMUD)	
Steven G. Lins, SMUD	6
Ed Hamzawi, SMUD	6

Public Comment(\* Via WebEx)

Daniel Boatman, Grid Defender	3
Steve Uhler	3
Bernadette Del Chiaro, California Solar & Storage Association	3, 6
Noah Horowitz, NRDC	5
Mary Anderson, PG&E	5
*Mel Hall-Crawford, Consumer Federation of America	5
*Christopher Granda, Appliance Standard Awareness Project	5
*Daniel Buch. CPUC	5
*9: Laura Gildengorin, CARES	5
Bob Raymer, CBIA	6
Ed Smeloff, Vote Solar	6
Stephen Campbell, Grid Alternatives	6
Matt Brost, SunPower	6
Harold Thomas	6
Donald Osborn, Spectrum Energy	6
Lee Miller	6
Rick Codina	6
Christopher Worley, Vivint Solar	6
Al C. Rich, ACR Solar	6
Mark Abrams, Solar Edge Technologies, Inc.	6
Ed Murray, Aztec Solar, Inc.	6
Steve Berlin	6
Benjamin Davis, California Solar & Storage Association	6

APPEARANCES (CONT.)

<u>Public Comment</u> (* Via WebEx)	Agenda Item
Joseph H. Cain, Solar Energy Industries Association (SEIA)	6
Sheridan Pauker, Keyes & Fox representing CalSSA	6
Julia Kantor, Keyes & Fox/CalSSA	6
Alexander McDonough, Sunrun	6
Susannah Churchill, Vote Solar	6
Rachel Bird, Borrego Solar	6
Todd Farhat, SunStreet	6
Stacey Reineccius, Power Tree	6
Lauren Cullum, Sierra Club	6
Julia Randolph	6
Christina Marshall	6
Rick Umoff, SEIA	6
Dan Jacobson, Environment California	6
Dave Shelby	6
Megan Shumway	6
*David Rosenfeld, Solar Rights Alliance	6
*Dan Gleason Camp, California Native Plant Society	6
Paul Kangas, Self (Comments reads into the record)	

I N D E X

	Page
Proceedings	9
Items	
1. Consent Calendar. (Items will be taken up and voted on as a group. A Commissioner may request that an item be moved and discussed later in the meeting.)	21
a. SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT	
b. ASSOCIATION OF WOMEN IN WATER, ENERGY AND ENVIRONMENT (AWWEE)	
c. PARTICIPATION IN CPUC EPIC PROCEEDINGS	
2. Paul Jacobs Proposed resolution recognizing and commending Paul Jacobs for his contributions to the CEC	21
3. Discussion of CEC Energy Resiliency Efforts	32
4. Discussion of CEC Progress on Joint Agency Report, Charting a Path to a 100 Percent Clean Electricity Future, Senate Bill (SB) 100 (2018)	46
5. Appliance Efficiency Regulations Rulemaking for General Service Lamps (Docket Number 19-AAER-04).	53
a. NEGATIVE DECLARATION FOR THE PROPOSED APPLIANCE EFFICIENCY REGULATIONS FOR GSLs	
b. APPLIANCE EFFICIENCY REGULATIONS FOR GSLs	

I N D E X (Cont.)

6.	Sacramento Municipal Utility District (SMUD) Community Solar Program	73
7.	Load Management Rulemaking (Docket Number 19-OIR-01)	192
8.	Variable Capacity Heat Pump (VCHP) Performance Compliance Option	196
9.	Energy Conservation Assistance Act (ECAA) Rulemaking (Docket Number 18-OIR-02)	204
10.	Determination of Consistency of Integrated Resource Plans (IRP) with SB 350	207
	a. BURBANK WATER AND POWER	
	b. IMPERIAL IRRIGATION DISTRICT	
	c. CITY OF REDDING	
	d. CITY OF ROSEVILLE ELECTRIC UTILITY	
11.	Minutes	226
12.	Lead Commissioner or Presiding Member Reports	226
13.	Executive Director's Report	243
14.	Public Advisor's Report	248
15.	Public Comment	42, 59, 80, 193, 220, 224, 241, 243, 245, 247



## 16. Chief Counsel's Report

251

- a. Pursuant to Government Code Section 11126(e), the Energy Commission may adjourn to closed session with its legal counsel to discuss any of the following matters to which the Energy Commission is a party:
- i. *In the Matter of U.S. Department of Energy (High Level Waste Repository) (Atomic Safety Licensing Board, CAB-04, 63-001-HLW); State of California v. United States Department of Energy (9th Cir. Docket No. 09-71014)*
  - ii. *Communities for a Better Environment and Center for Biological Diversity v. Energy Resources Conservation and Development Commission, and California State Controller, (Alameda County Superior Court, Case No. RG13681262)*
  - iii. *State Energy Resources Conservation and Development Commission v. Electricore, Inc. and ZeroTruck (Sacramento County Superior Court (34-2016-00204586)*
  - iv. *Natural Resources Defense Council, Inc., et al. v. United States Department of Energy (Federal District Court, Northern District of California, (17-cv03404)*
  - v. *City of Los Angeles, acting by and through, its Department of Water and Power v. Energy Commission (Los Angeles Superior Court, Case No. BS171477).*
  - vi. *Helping Hand Tools v. California Energy Commission, and Vantage Data Centers LLC. (Sacramento Superior Court, Case No. 34-2018-80003026).*

I N D E X (Cont.)

16. Chief Counsel's Report (Cont.)	251
viii. <i>Chukwuemeka (Emeka) Okemiri v. California Energy Commission, et al.</i> (Sacramento Superior Court, Case No. 34-2018-00246019)	
ix. <i>State Energy Resources Conservation and Development Commission v. HyGen Industries, Inc.</i> (Sacramento County Superior Court, Case No. 34-2019-00252543)	
b. Pursuant to Government Code section 11126(e), the Energy Commission may also discuss any judicial or administrative proceeding that was formally initiated after this agenda was published; or determine whether facts and circumstances exist that warrant the initiation of litigation, or that constitute a significant exposure to litigation against the Commission, which might include.	
Adjournment	251
Reporter's Certificate	252
Transcriber's Certificate	253

P R O C E E D I N G S

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

NOVEMBER 13, 2019

10:03 a.m.

CHAIR HOCHSCHILD: Good morning and welcome, friends. Let's start with the Pledge of Allegiance.

(Whereupon the Pledge of Allegiance is recited)

CHAIR HOCHSCHILD: Well, welcome everybody. So 44 years ago the California Energy Commission was born with a mission to make things better and to push for a cleaner healthier future for the next generation. And in the intervening time we've saved the people of California over \$100 billion on their energy bills from the energy codes and standards.

We have invested heavily in the clean energy technologies of the future and really incubated the solar and wind and electric vehicle industries around the country and around the world. And I'm very, very proud of all of our staff for the hard work that they do every day. None of this would have been possible, our agency would have been possible were it not for the dedication and vision of Charlie Warren who passed away last week.

And I recall right when I started at the Energy Commission as a Commissioner about six-and-a-half years ago I looked him up and asked if he would be able to have lunch with me. He very kindly said yes and what I learned in that lunch was what drove him. He was a man of vision, a

1 generous, generous heart and politically very skilled to do  
2 what he did, the negotiations with Ronald Reagan, which  
3 were intense and heated and difficult but ultimately  
4 successful. It's a rare feat. And I know I speak for all  
5 my colleagues when I say we are proud to come to work every  
6 day in a building that's named after him. His legacy lives  
7 on.

8           And we're very, very lucky today to be joined by  
9 Charlie Warren's family: Tom Warren, Cynthia Warren, Linda  
10 Healy, Noel Nabeshima -- I hope I say that right -- and  
11 Alison Carson. If we could ask all of you to stand, we  
12 want to give you a standing ovation.

13           (Whereupon a standing ovation was given.)

14           CHAIR HOCHSCHILD: Thank you so much.

15           So what we're going to do, we do have a  
16 resolution here in a minute, but I want to first open up to  
17 my colleagues if there's any comments my fellow  
18 Commissioners would like to make about Charlie Warren.

19           COMMISSIONER DOUGLAS: You know, I just wanted to  
20 say that we had the opportunity to meet Charlie Warren and  
21 spend time with him at a number of events around the Energy  
22 Commission. And he was so fun to talk to and so generous  
23 with his time and so caring about the work we did do and so  
24 interested in how the Energy Commission has evolved over  
25 time. And the nature of the challenges that we face today,

11

1 which are derived from but are not the same as what drove  
2 the creation of the Energy Commission 44 years ago.

3           And I think it meant a lot to him to see the  
4 impact that his work has had over decades in California.  
5 And it certainly meant a lot to me to have the opportunity  
6 to meet him and to have the opportunity to kind of share  
7 back and forth with him. So anyway I really appreciate all  
8 of you being here as well. And I loved meeting and talking  
9 to Charlie Warren.

10           VICE CHAIR SCOTT: I would echo very much those  
11 same sentiments. I only had the opportunity to meet him  
12 once or twice and that was during our 40th anniversary for  
13 the Energy Commission. But he was so warm and thoughtful  
14 and engaging. And the vision that he had for the state, I  
15 think, is still really quite amazing. And it's completely  
16 transformed the way that the State of California and  
17 probably the rest of our country and the world have gone.

18           And so to have that level of vision to bring that  
19 dedication and care to the people of California, it really  
20 was an honor for me to get to meet him. And then it's an  
21 honor to follow in his footsteps, so my condolences to your  
22 family. And he was a wonderful warm, thoughtful visionary  
23 man.

24           COMMISSIONER MCALLISTER: So (indiscernible)  
25 condolences. I know it must be a hard time. He had an

1 amazing life and so obviously we can all, and you can take  
2 heart in that.

3 I got the sense the few times that I met him I  
4 got the sense he was a really happy with the results, the  
5 fruits of his labor, because he was really proud of what we  
6 were doing. And I got that sense. It seemed palpable when  
7 you talked to him. He was interested in sort of what was  
8 happening day in and day out at the Commission, but also  
9 just as an enterprise. He saw it as just such an amazing  
10 force for good and rightfully so. And I think taking some  
11 ownership of that was totally appropriate and really  
12 improved and was a positive influence on his life. So I  
13 enjoyed that.

14 And actually we have an item today that we're  
15 going to -- you read the Warren-Alquist Act and it seems  
16 like it could have been written yesterday. It's like it's  
17 so present and so current. And we have an item that we'll  
18 be voting on, which is using some of the authority that was  
19 imbedded back in the mid '70s in a progressive and  
20 innovative way. But there was the bedrock for it right  
21 there, so he laid a really strong foundation.

22 And lastly I enjoyed telling that whole story  
23 about how the Warren-Alquist Act came into being and  
24 actually was signed by Ronald Reagan. Because Charlie  
25 Warren and Al Alquist had the vision to put it together and

1 have it waiting in the wings and had done all the leg work  
2 and the spade work over the previous years. So when there  
3 was a crisis, they were prepared for it and Reagan dusted  
4 it off and signed it. It was just such an amazing story.

5 So it takes that. You make your own luck and he  
6 was a master at that, so thanks for being here and my  
7 condolences.

8 CHAIR HOCHSCHILD: Okay. So what we're going to  
9 do, we have some very special personal remarks in a moment  
10 that Holly is going to share. But before we do that I'm  
11 just going to read a resolution we're going to give you  
12 today in his honor. So,

13 "Whereas, Charlie Warren was born in Kansas City,  
14 Missouri on April 26th, 1927, he received a Bachelor of  
15 Arts in Economics from the University of California at  
16 Berkley and a Juris Doctorate from Hastings College of Law;  
17 and

18 "Whereas, Warren served in the Unites States Army  
19 in Japan from 1944 to 1946; and

20 "Whereas, Warren was a member of the San  
21 Francisco law firm of Darwin, Peckham and Warren from 1952  
22 to 1955; in Los Angeles, he was a member of the law firm of  
23 Bodle, Fogel and Warren from 1955 to 1960; and a member of  
24 the law firm Warren, Adell and Miller from 1960 to 1974;  
25 and

1           "Whereas, Warren was elected in 1962 to the  
2 California State Assembly, he was elected to represent the  
3 56th Assembly District, which became the 46th Assembly  
4 District after redistricting. He represented the Los  
5 Angeles area including Hollywood and Wilshire until 1977;  
6 and

7           "Whereas, as a member of the Assembly, Warren  
8 worked on numerous issues including fair housing, civil  
9 rights, pay equity, transportation, air quality and other  
10 environmental issues; and

11           "Whereas, Warren and Senator Alfred Alquist  
12 coauthored the 1974 Warren-Alquist State Energy Resource  
13 and Conservation and Development Act, which addressed the  
14 state's growing demand for energy and established the  
15 California Energy Commission. The Energy Commission, which  
16 is the state's primary energy policy and planning agency is  
17 leading California to a 100 percent clean energy future.

18           "Whereas, to honor the two men who helped create  
19 the organization as part of the Energy Commission's 40th  
20 anniversary in 2015 the Sacramento headquarters building  
21 was renamed the Warren-Alquist State Energy Building; and

22           "Whereas, Warren was one of the principal authors  
23 of the 1976 Coastal Protection Legislation that created the  
24 California Coastal Commission, to protect and enhance  
25 California's coast and ocean for present and future



1 generations; and

2 "Whereas, Warren also initiated and developed the  
3 first statewide 911 emergency telephone system in the U.S.;  
4 and

5 "Whereas, Warren also served as Chair of the  
6 California Democratic State Central Committee from 1966 to  
7 1968; and

8 "Whereas after leaving the State Assembly, Warren  
9 served on President Jimmy Carter's Cabinet as Chair of the  
10 Council on Environmental Quality from 1977 to 1979. At the  
11 Council he oversaw the promulgation of the legally binding  
12 regulations for federal agency compliance with the National  
13 Environmental Policy Act requirement for environmental  
14 impact statements; and

15 "Whereas, Warren also served as Chair of the  
16 Energy Taskforce of the National Legislative Conference as  
17 a member of the Environmental Advisory Committee of Federal  
18 Energy Administration as a member of the California Coastal  
19 Commission.

20 "Now therefore be it resolved that the California  
21 Energy Commission recognizes and commends Charles Warren.  
22 He was a man of great integrity with a bold and expansive  
23 vision and a generous heart."

24 So congratulations.

25 (Applause.)

1 CHAIR HOCHSCHILD: So we'll present that to you.  
2 At this time, I'd like to invite Ali (phonetic) up to the  
3 podium. Ali, thank you again for agreeing to come speak  
4 and we're going to hear a little bit more about Charlie  
5 Warren the person.

6 ALI: Okay, can you hear me?

7 CHAIR HOCHSCHILD: Yes, yes.

8 ALI: Okay. Great. It is with great sadness and  
9 grief I stand here today to honor the memory of the one and  
10 only Charles H. Warren and give you all a glimpse of what  
11 an extraordinary man, mentor and dear friend Charles Warren  
12 was to me. First, to Charles Warren's family and friends  
13 and colleagues, I'm extremely sorry for our loss and I  
14 extend condolences to everyone.

15 After moving from the journey to California in  
16 late 1980, I met Charles Warren in April 1981 when he hired  
17 me to be the secretary for him and a block of four other  
18 environmental consulting firms, which were sharing office  
19 space.

20 Charles turned out to be my first West Coast male  
21 role model who always showed care and concern for me. I  
22 could share with him any of my life circumstances and he  
23 would always offer his opinion on how I could best deal  
24 with the situation, and suggesting others who could help me  
25 deal with whatever the issue was at the time. One person

17

1 he referred me to was his lovely wife, Audrey, who was a  
2 tremendous resource for me.

3 To have someone like Charles Warren who was  
4 willing to lead, guide me and share life experiences with  
5 me as I was becoming an adult was so invaluable to me. I  
6 would like to give you an example of what a kind and fair  
7 man Charles Warren was. When he hired me, I was 19, with  
8 minimum work experience. I was referred to him by Martha  
9 Gorman, a trusted family friend of his. He introduced me  
10 and afterwards to my delight he offered me the job, which I  
11 gladly accepted. There were two conditions. He was going  
12 to give me a three-month probation period and reduce my  
13 salary during that time.

14 Well, at the end of the first month, he told me  
15 that he could tell I would work out well for the group. He  
16 further let me know that I was no longer on probation and  
17 that I was going to get my full salary starting that month.  
18 Who does that? The answer is Charles Warren.

19 Throughout my career, all the positions I've held  
20 can be linked back to my very good fortune of having met,  
21 worked for and becoming friends with Charles Warren.

22 In the CEC resolution for him you heard of  
23 Charles Warren's many selfless life accomplishments, which  
24 allowed many to have a better quality of life. We all will  
25 forever owe him a debt of gratitude and thanks.

1           It seems surreal that our Friday lunches have  
2 abruptly come to a close. I am so grateful to have had  
3 those special moments with Charles and Audrey. And will  
4 always cherish the memories of those fun times and of our  
5 letting each other know we were loved.

6           Charles Warren has left his footprints behind and  
7 it is evident that he was here among us as he left a great  
8 legacy, which includes his fabulous family and the issues  
9 he solved for California and nationwide. This world was  
10 made better by having him in it. He did it all very  
11 humbly.

12           Charles Warren was a one of a kind man. I miss  
13 and will miss him dearly. I do recognize that I am so  
14 blessed and privileged to have known the down-to-earth,  
15 wonderful, extraordinary and loving man, Charles Warren.

16           For a job well done on earth in all areas of your  
17 life, Charles Warren, you are loved and you can now rest in  
18 peace. Thank you.

19           (Applause.)

20           CHAIR HOCHSCHILD: That was beautiful.

21           (Applause.)

22           CHAIR HOCHSCHILD: Thank you. At this time I  
23 would like to invite up any members of the Warren family  
24 who'd like to make any remarks.

25           MS. HEALEY: I'm his daughter, Linda. I wanted

1 to thank you so much for taking the time to honor my  
2 father. He was a modest man who never liked to focus on  
3 his achievements, but all of us in this room know that  
4 through his actions including the establishment of this  
5 Commission he made a difference in California and indeed  
6 the world.

7 I'm reminded of the last time I was here. It was  
8 the dedication of this building as the Warren-Alquist  
9 Building. Dad had a speech prepared, but in looking around  
10 the room he realized that the audience included many staff  
11 members and his initial prepared speech needed some  
12 amending. He checked his notes and spoke off the cuff  
13 doing his best to help Commission Members and staffers  
14 remember the significance of their work and to inspire them  
15 to tirelessly carry on. I know that's what he'd want you  
16 all to focus on today.

17 Again, many thanks from our family for  
18 recognizing a man who is special not only to his family but  
19 also helped put California on the path to cleaner energy.  
20 Thank you.

21 CHAIR HOCHSCHILD: Thank you. (Applause.)

22 What I suggest we do is, Katie, why don't we get  
23 a picture if we could with all the members of the Warren  
24 family and the Commissioners here with the resolution.

25 (Whereas photos are taken.)

1           CHAIR HOCHSCHILD: I think Charlie would want  
2 nothing more than for us to continue with our mission. And  
3 that actually begins with adding some good people. Every  
4 agency in the State of California is only as good as the  
5 people in it. And so first of all, I'm very pleased to  
6 announce my new Chief of Staff, Le-Quyen Nguyen, who's over  
7 here, who -- (applause) yeah, congratulations Le-Quyen.

8           She is phenomenally well organized, which is what  
9 I need in the chaos of my week. And she's been at the  
10 Commission since 2007, ran the New Solar Homes Program, was  
11 our Distributed Generation and Technical Lead, was an  
12 Advisor very ably to Commissioner Douglas, worked on land  
13 use issues, tribal issues and most recently ran the Supply  
14 Office here. We're really, really proud of you and happy  
15 to have you on the team and getting me organized here. I'm  
16 much in need of that.

17           And then we also have a terrific new Lead for our  
18 Communications team in the form of Lindsay Buckley. So  
19 Lindsey was hard to get. She was at the Air Resources  
20 Board for five years working with Mary Nichols, was heavily  
21 recruited by the PUC, by CalEPA and CARB wanted to keep  
22 her.

23           And we're really lucky to have her incredible  
24 talents here, because half of what we need to do is  
25 actually communications. We are doing some very, very bold

1 policy work here on pushing for 100 percent clean energy  
2 and clean transportation. And sharing those stories  
3 effectively around the state and around the nation and  
4 around the world is paramount.

5 So I also want to recognize her mother, Tracie,  
6 (phonetic) who is here. So thank you for joining. And at  
7 this time, I want to invite Lindsay up and I will swear her  
8 in.

9 (Whereupon Lindsay Buckley is sworn in to office.)

10 CHAIR HOCHSCHILD: Okay. Let's move on to the  
11 Consent agenda. Is there a motion for the consent  
12 calendar?

13 COMMISSIONER MCALLISTER: Move consent.

14 COMMISSIONER DOUGLAS: Second.

15 CHAIR HOCHSCHILD: All in favor say aye.

16 (Ayes.)

17 CHAIR HOCHSCHILD: That motion passes  
18 unanimously.

19 Let's move on to Item 2, Paul Jacobs.

20 So Paul is another superstar here. And we have a  
21 resolution in your honor, Paul. Thank you for joining,  
22 which I'll read quickly here.

23 "Whereas, Paul Jacobs spent his career of more  
24 than 35 years as a public servant with the State of  
25 California and during that time was integral to

1 implementing and growing multiple state environmental and  
2 energy policy enforcement programs that continually  
3 substantially contribute to a better quality of life for  
4 all Californians; and

5 "Whereas, Mr. Jacobs built the California Energy  
6 Commission's Office of Compliance Assistance and  
7 Enforcement into a robust program that plays an important  
8 role in ensuring fair business practices in capturing  
9 critical energy efficiency and water use saving by  
10 enforcing a wide range of appliance and equipment  
11 regulations; and

12 "Whereas, Mr. Jacobs brought his professional  
13 experience to bear in helping develop and improve  
14 compliance aspects of other Energy Commission programs; and

15 "Whereas Mr. Jacobs managed multiple  
16 groundbreaking and successful air quality enforcement  
17 programs during his decades of tenure at the Energy  
18 Commission's sister agency, the California Air Resources  
19 Board; and

20 "Whereas, Mr. Jacobs benefitted the state  
21 workforce through his longstanding dedication to  
22 development, recruitment and mentorship, therefore be it  
23 resolved that the California Energy Commission commends and  
24 thanks him for his years of public service and acknowledges  
25 his contributions to environmental quality and his



1 accomplishments throughout the many years of service that  
2 he's given the Energy Commission and the people of the  
3 state of California.

4 "The Energy Commission congratulates Paul Jacobs  
5 on his retirement and wishes him good health and happiness  
6 and all the best in the future endeavors." Congratulations  
7 Paul. (Applause.)

8 So if we can have Drew make a few brief remarks  
9 and then we'll hear from Paul.

10 COMMISSIONER MONAHAN: Oh, can I actually, do you  
11 mind? Can I say something nice about Paul, because he's a  
12 special guy?

13 CHAIR HOCHSCHILD: Sure.

14 COMMISSIONER MONAHAN: So I first met Paul when I  
15 was working for the Union of Concerned Scientists reducing  
16 diesel pollution and Paul was at the Air Resources Board.  
17 And I've got to say it's just a wonderful thing that this  
18 very accomplished compliance leader who was really focused  
19 on making sure that enforcement was carried out to the  
20 letter of the law was also such an incredibly nice and  
21 generous person.

22 And when he was just very welcoming when I worked  
23 at an environmental nonprofit and when I started here at  
24 the Commission, he reached out to me immediately and he was  
25 like, "Come and have lunch. Let's talk." I mean he was

24

1 mentoring me in my first couple of weeks here at the  
2 commission. So just a personal thank you for your  
3 leadership and the fact that you could be so accomplished  
4 and so deft at making sure that there was compliance by the  
5 regulated community and also be so nice. I think you're a  
6 great role model for all of us.

7           COMMISSIONER DOUGLAS: So I think I'm going to  
8 have to jump in and embarrass Paul too. Paul, you've been  
9 a real pleasure to work with. And Paul helped build our  
10 Compliance Program, especially on appliances energy  
11 efficiency standards. But other programs as well, really  
12 from the ground up. And he took the risk of taking a jump  
13 to the Energy Commission to share expertise that he had  
14 honed over a career at the Air Resources Board. And we  
15 benefitted greatly and will going forward from the legacy  
16 he's left here for us.

17           And I couldn't agree more with Patty that on top  
18 of being tremendously effective and skilled and  
19 knowledgeable and good at what he does, he's just a really  
20 great person to have around. He's really fun to be with.  
21 And I will miss having Paul here at the Commission. So  
22 thank you for your work for us, Paul.

23           VICE CHAIR SCOTT: I will jump in here as well.  
24 I just kind of echo everything that you have heard already.  
25 It's been a real pleasure to get to work with you. I think

25

1 that you really did help the Energy Commission to up our  
2 game in the compliance space. You brought a new level of  
3 professionalism and expertise to us. And compliance really  
4 matters, so we can set great standards and have great  
5 goals, but if we don't make sure that we're complying all  
6 along the way then we can't actually meet those. And so  
7 that role is incredibly important and often understated.  
8 It kind of goes on in the background, but you do such a  
9 fantastic job with that. It's been a pleasure to work with  
10 you and I wish you all the best.

11 COMMISSIONER MCALLISTER: Okay. Well, since I'm  
12 here, so I wanted to give Rob Oglesby who's in the audience  
13 kudos for bringing Paul here. I mean, just fishing him out  
14 of that ocean and bringing him up here was great.

15 And so on the Appliances front, I got regular  
16 briefings and kept track of all that. And, Paul, you built  
17 a team that was being such a nice guy I think you attracted  
18 a lot of nice people onto your team and Kirk and others.

19 And on the one hand if you look at our website,  
20 and you look at all the settlements that we've gotten in  
21 the Appliances realm, it's a lot of money. And it's sort  
22 of there's these big waves of robotic vacuum cleaners and  
23 then another category and another category as all the  
24 (indiscernible) ride each other around. And they come in,  
25 "Oh, they're not compliant. Oh, they're not compliant."

26

1 And just mopping that up and making sense of it. And  
2 figuring out what's a just conversation with each company  
3 is a highly technical and difficult thing to do. And yet  
4 just look at the web page and there's an immense amount of  
5 success there and some revenue that helps fund this effort,  
6 right?

7 On the other hand, you hear from the regulated  
8 community and they say, "Wow, you know we had to pay a  
9 fine, but it really was a pretty great experience."  
10 (Laughter.) I mean those two things usually do not go  
11 together. And it's just a testament to the team that  
12 you've built and the fairness, the fundamental fairness of  
13 that activity here at the Commission.

14 And I think just overall it helps the Legislature  
15 saw fit to give us that authority. And I think it's pretty  
16 incontrovertible that we've used it well and to the benefit  
17 of the state. And that is in large measure due to your  
18 leadership and competence. So thank you very much.

19 CHAIR HOCHSCHILD: I second all those. You know,  
20 in hockey you get credited with an assist if you're two  
21 passes away. So Rob, you should be taken in also. So let's  
22 hear from Drew and then we'll hear from Paul.

23 MR. BOHAN: Well, thank you. I think the  
24 Commissioners covered it pretty well, but I just wanted to  
25 say thank you to Paul for what he's done for our

1 organization. Rob Oglesby had this idea there was this  
2 guy, Paul Jacobson, who might fit into the organization.  
3 So he asked me to have lunch with him four years ago. And  
4 I came back and said I think Paul would be great. So we  
5 brought him on, gave him basically a blank slate and said  
6 can you help develop something? And we all are well aware  
7 of the job he's done.

8           And I just wanted to underscore something you all  
9 said too. I've been in some very difficult conversations  
10 with him about really contentious matters. And he's had  
11 every reason to do otherwise, but I've never heard him once  
12 say an unkind thing about anybody else. And so  
13 thank you, Paul.

14           CHAIR HOCHSCHILD: All right, let's hear from  
15 Paul.

16           MR. JACOBS: Well, thank you Chair Hochschild and  
17 Commissioners. I'd like to thank you for your leadership  
18 and inspiration over the years. California is recognized  
19 as a worldwide leader in energy policy and environmental  
20 protection. And your work has played a critical role in  
21 this.

22           Please know that your work has made a huge  
23 difference to the 40 million plus Californians and the  
24 earth's 7.2 billion inhabitants making our planet more  
25 sustainable through generations to come.

1           Upon my arrival about four years ago, and it was  
2 many a lunches, Drew was being modest there, they had  
3 really, really encouraged me to make that leap. I knew  
4 that we had tremendous support from all of you; your  
5 advisors; the Executive Office; Rob; Drew and Kourtney; the  
6 small offices; Barry Albert; Lisa Negri, who had to do all  
7 the financial analysis assessments for their ability to  
8 pay; the Chief Counsel's Office under Kourtney Vaccaro and  
9 her stellar legal team, which is critical to the success of  
10 an enforcement program; the program divisions; and Mark  
11 Hutchison and his successor Rob Cook and their  
12 administrative team; the Accounting Office who has to  
13 collect and deposit all of our penalties; the Budget  
14 Office, who helps us get the BCPs through the legislative  
15 process to secure more staff and funding; the Facilities  
16 team; their IT team and the list goes on.

17           Then also I'd like to recognize my tremendous  
18 staff. And then also our contractors that we brought on; a  
19 number of universities to do our testing including  
20 Professor Marbach at Cal State University, Sacramento;  
21 Professor Siminovitch at UC Davis; CLTC, and Tom  
22 Kirchstetter at Lawrence Berkeley National Laboratory.

23           I would be here all day today trying to recognize  
24 everyone, so I apologize for those that I haven't  
25 mentioned.

1           In my next chapter, I have offers for part-time  
2 consulting and to return as a retired annuitant. But I  
3 need to recharge my battery and hopefully these battery  
4 chargers are working for me. (Laughter.)

5           I have other planned activities including  
6 volunteering at various associations such as the  
7 Alzheimer's Association. I lost my mother and grandmother,  
8 and last night my mother-in-law to this terrible disease.  
9 I'm volunteering at Loaves & Fishes and Habitat for  
10 Humanity, but I need to get my eye surgery done. Many of  
11 you have heard that story, before I can do that.

12           I did work in construction; the three-generation  
13 Jacob's Masonry business going through college and the  
14 like. But I don't want to go and work for them quite yet.  
15 So I want to make sure the eyes are fixed, so I can make  
16 sure I'm building straight walls and the like. (Laughter.)

17           Other projects that I'll be engaged in, and I'm  
18 currently engaged in, I'm very active doing environmental  
19 mentoring consulting, recruiting to the UC Berkeley Alumni  
20 Association and the Society of Automotive Engineers. They  
21 recruited me to be one of their college recruiters. As a  
22 matter of fact, I was down at Berkeley last week doing one  
23 of these events.

24           And as I told Jessica Wu, your fabulous  
25 Recruiting Officer here, I'm always available for any help

1 she needs. Recruiting and education are critically  
2 important to sustain our staffing not only here but also in  
3 other organizations to advance the clean energy and  
4 environmental protection agenda.

5 We all know climate change is an existential  
6 threat we all face. And we have no Planet B as one of my  
7 favorite tee shirts says.

8 Thank you from the bottom of my heart for this  
9 great opportunity. I will miss all of you, but I'm only a  
10 call, email, LinkedIn, ping or text away. It has been an  
11 honor and pleasure to work with all of you. Thank you.

12 (Applause.)

13 CHAIR HOCHSCHILD: Thank you so much, Paul. And  
14 there's a great saying I love, which is where there's great  
15 effort there's great light. And I really have sensed the  
16 light coming from you. Why don't we come up and do a photo  
17 together with the resolution?

18 (Off mic colloquy.)

19 CHAIR HOCHSCHILD: Oh, my apologies. You were  
20 going to -- let's hear from you first, Rob, and then we'll  
21 do a photo. Thank you.

22 MR. OGLESBY: Chair Hochschild and Commissioners,  
23 thank you for allowing me to add my voice to the chorus of  
24 well-deserved praise for Paul Jacobs, his amazing career,  
25 his contributions, his dedication as a public servant, his

31



1 longtime commitment to the environment and now his well-  
2 deserved retirement.

3 I've known Paul for over 25 years, closer to 30,  
4 Paul, where we begin our work our early career at the Air  
5 Resources Board working on pollution issues. And we worked  
6 closer together when we were both assigned to do some  
7 technical work on an emissions pollution trading scheme  
8 that had been bouncing through the Legislature and needed a  
9 close look and a critical evaluation. And we got to know  
10 each other real well then.

11 And I came to know that Paul was an exceptional  
12 human being. And he spent years on the air quality  
13 frontier ensuring that we achieved the emissions benefits  
14 that we were seeking to make our air healthful.

15 We were lucky to draw him over to the Energy  
16 Commission where he could continue his work where he had to  
17 build his own infrastructure as you heard, including the  
18 procedures. He just had the knowhow and the wherewithal to  
19 bring the infrastructure, to have the lab, the testing, to  
20 make sure that we could make sure the Energy Commission and  
21 the goals for the Energy Commission, our energy regulations  
22 and our environmental goals, were furthered here by fully  
23 achieving our standards.

24 So with that, I wanted to congratulate Paul for a  
25 job well done and wish him well on his well-earned, well-

1 deserved retirement. So thank you.

2 CHAIR HOCHSCHILD: Thank you, Rob.

3 Let's invite Paul up and we'll do a photo here.

4 (Whereas photos are taken.)

5 CHAIR HOCHSCHILD: Well, I do hope you recharge  
6 your batteries, Paul. We're investing very heavily in  
7 recharging infrastructure across the state, so make use of  
8 that.

9 CHAIR HOCHSCHILD: Let's move on to Item 3,  
10 Discussion of CEC Energy Resilience Efforts.

11 MR. BOHAN: Great. Thank you, Chair.

12 As we all know, wild fires have been raging  
13 across the state for the last couple of years in  
14 unprecedented size and scope. And they've touched all of  
15 us. Folks have lost their lives. Others have lost  
16 property.

17 And this year we've seen a lot more public safety  
18 power shutoffs. They've impacted some of you on the dais,  
19 others in this room. And our Governor has made clear this  
20 is not the new normal. And I wanted to just let you know  
21 that the CEC is doing a lot of work in this area and wanted  
22 to call up two of our experts to talk about what we're  
23 doing. We're doing things both in the immediate term, so  
24 first up is Justin Cochran. He's our Emergency Coordinator  
25 and Nuclear Advisor to the Chair. And he has spent some

1 sleepless nights over at the SOC, the State Operations  
2 Center, during the last shutoff. And we wanted to hear  
3 from him and then we'll hear from Laurie ten Hope about  
4 some of our longer-range efforts in this area.

5 MR. COCHRAN: Good day, Commissioners. I'm here  
6 to briefly speak on two issues. One is the Energy  
7 Commission's role in the recent emergency activity response  
8 efforts. And the other is the agency's emergency  
9 programming and planning activities.

10 On April 2nd of 2019, the California Natural  
11 Resources Agency delegated additional responsibilities to  
12 our agency making us the lead state agency for Emergency  
13 Support Function 12.

14 As the lead state agency, the Energy Commission  
15 is tasked with providing guidance, ongoing communication,  
16 coordination and oversight throughout all phases of an  
17 emergency. In this role, the Energy Commission coordinates  
18 closely with the California Governor's Office of Emergency  
19 Services, the California Utilities Emergency Association.  
20 And the purpose of that is just for efforts that are  
21 consistent with the state's emergency plans.

22 The Energy Commission is a state central hub for  
23 energy information. In its expanding role, the Commission  
24 supports emergency services and critical energy  
25 infrastructure operations during a declared emergency in

1 cooperation with state agencies the private sector and  
2 relevant stakeholders.

3           During the recent October public safety power  
4 shutoffs and fires, Commission staff were activated and  
5 reported to state operations center to support emergency  
6 response efforts. Conventional subject matter experts were  
7 tasked with providing critical information on key energy  
8 infrastructure impacts and coordinating with state and  
9 private sector partners to mitigate the effect of grid de-  
10 energization.

11           Staff efforts included supporting state emergency  
12 response taskforce activities, reporting on critical  
13 infrastructure to state leadership, and developing  
14 recommended courses of action to mitigate the impacts of  
15 grid de-energization.

16           California law requires state agencies to  
17 regularly engage in planning and preparedness activities.  
18 One of the ongoing interagency planning activities is the  
19 Southern California Catastrophic Earthquake Plan Update.

20           Energy Commission staff have been involved in  
21 multi-agency workshops focused on expanding planned  
22 functionality by providing energy infrastructure insight  
23 and recommendations. As part of its ongoing mission, the  
24 Energy Commission has maintained extensive knowledge and  
25 historical understanding of the regional petroleum supply

1 and petroleum infrastructure.

2           This is the basis of one of the more powerful  
3 emergency support tools available to Commission leadership,  
4 the Petroleum Fuel Set Aside Program. The Petroleum Fuel  
5 Set Aside Program is intended to ensure fuel supplies are  
6 available to emergency services during widespread shortage  
7 of supply.

8           The program is implemented at the direction of  
9 the Governor in response to extreme transportation fuel  
10 supply shortages. Once implemented the program empowers  
11 the Energy Commission to hold and redirect petroleum stocks  
12 as needed to ensure health, safety and the welfare of the  
13 publics.

14           Petroleum supplies are directed at the judgement  
15 of the Chair of the Energy Commission in coordination with  
16 the Director of the Governor's Office of Emergency  
17 Services. Diverted fuel is to be used for supporting  
18 emergency functions in the disaster area or for disaster  
19 mitigation operations. The program has not be formally  
20 activated since 1979, but Commission staff have engaged  
21 regularly with our state partners to provide informal  
22 assistance over the years.

23           That concludes my update. Thank you for your  
24 time and attention.

25           MR. BOHAN: Thank you.

1           Next up is Lorie ten Hope. She is the Deputy  
2 Director for our Research and Development Division and is  
3 going to talk a little bit about our work on resiliency.

4           MS. TEN-HOPE: Good morning Chair and  
5 Commissioners. So I just want to highlight a few areas in  
6 our research program that have so far been really a great  
7 resource in these more recent resilience challenges that  
8 we've had. And then also some of the research that is  
9 underway that we hope will really amplify the role that  
10 microgrid storage and other technologies can play to help  
11 communities and individual customers, both ride out the  
12 impacts of the PSPS events that have been experienced, but  
13 also climate threats that we haven't yet experienced.

14           So first I just want to highlight a little bit  
15 about the climate science. Before we mitigate the results  
16 we really want to understand what are the climate risks  
17 that California is likely to face, and what are communities  
18 and commercial customers, residential customers likely to  
19 face in terms of wild fires, floods, earthquakes and other  
20 climate-related issues going forward

21           We were part of a trifecta of the Fourth Climate  
22 Assessment that was a really rich body of work that gave  
23 some real insights to the climate risks that we are  
24 experiencing and are anticipated. And we're also now  
25 gearing for the Fifth Climate Assessment.

1           One of the awards that you have already made, and  
2 our staff is beginning to work on is an agreement with  
3 Infomatics, which is really trying to understand much  
4 better our fire risk in future climate conditions with tree  
5 mortality and warmer temperatures. And that will give us  
6 some insights into the infrastructure that's most at risk.

7           Turning from the science to the technology,  
8 microgrids have gotten a lot of attention in the last few  
9 weeks and for good reason. And the Energy Commission has  
10 been a proud partner in supporting microgrids for the past  
11 decade. We currently are funding over 22 microgrids at 38  
12 different sites. Some of those are active and were called  
13 on most recently in the last PSPS. And others are still in  
14 the design phase.

15           One of the microgrids that has been called on a  
16 couple of times is Blue Lake Rancheria and it's been  
17 heavily covered in the press. It's a casino. And my prior  
18 Executive Director at one point says. "We're funding a  
19 casino?" It's an emergency shelter for the North Coast  
20 area and so it becomes a really important area for the  
21 North Coast in emergency situations.

22           And in the last October PSPS event, they were  
23 able to serve an estimated, on their estimates, 10,000  
24 people came to their facilities. Some were residents that  
25 were medically dependent equipment that they were able to

1 charge. And people were able to charge their cell phones  
2 and communicate. Their fueling stations were active and  
3 thousands and thousands of bags of ice, which if you have  
4 no refrigeration is a valued commodity.

5           Some of our other microgrids were standing ready.  
6 They were in or near a PSPS area, including Los Positas  
7 Community College, the Richmond Hospital, Kaiser Hospital  
8 and the Fremont fire stations. All were ready to be able  
9 to island themselves and keep their critical facilities  
10 operating.

11           So the other facilities that are on either up and  
12 operating or coming are critical facilities like ports, the  
13 Ports of San Diego and Long Beach, three military bases,  
14 wastewater treatment plants, colleges. And other  
15 commercial endeavors that are really interested in the  
16 resilience and sustainability, but also being able to do  
17 that with clean energy resources and less or no dependence  
18 on fossil backup generation.

19           And but microgrids aren't for every situation.  
20 It has sophisticated controls. It's expensive. It's still  
21 not plug and play and commercially available for everybody.  
22 So we're also looking and supporting Solar Plus storage.  
23 These are solutions that give resilience at multi-family  
24 buildings, commercial facilities and are more easily  
25 deployed resilience strategy.



1           We also -- I just wanted to mention one of our  
2 entrepreneurs is just a small grant. They're developing  
3 storage backup for telecommunication systems, so that they  
4 can be the portable delivery to backup communication  
5 systems in areas that are needed.

6           There's a lot of other work going on that really  
7 supports resilience. I just wanted to mention a couple of  
8 things that are launching soon for your consideration when  
9 you're thinking about what more could or should we do.  
10 Upcoming solicitations in storage are really going to be  
11 important. It's a backbone of microgrid. It's a backbone  
12 of anybody's resilience. So we are pursuing new  
13 technologies that are non-lithium based, so that we're not  
14 so dependent on one technology. That does have some  
15 challenges and we don't want to be 100 percent dependent on  
16 a technology that may not be the best suited for all  
17 applications.

18           And we also want to send a signal that we're  
19 interested in long-term long-duration storage of at least  
20 10 hours or more, so looking for new technologies and price  
21 reductions in that area. We're also putting out a  
22 solicitation for second-use batteries, so that they can be  
23 easily packaged and reused, assuming that they meet certain  
24 capacity requirements for second-use applications.

25           I mentioned the wild fire work. One other

1 microgrid area we're exploring, we don't know yet if it's  
2 an area worthy of investment, but we want to look at the  
3 possibility of portable microgrids that could maybe roll in  
4 to areas where they're needed, because you don't always  
5 know where you're going to need your backup energy systems.

6           So that's just sort of a high flyover on some of  
7 the activities we have that are actively supporting  
8 resilience or coming soon. We couldn't do that without  
9 researchers and communities that are willing to be the  
10 first demonstration sites. And so I really thank the  
11 communities and commercial partners that are demoing these  
12 technologies and providing lessons learned for everyone  
13 else. Thank you.

14           CHAIR HOCHSCHILD: Well thank you, Laurie. You  
15 know, in many ways I think the two offices we just heard  
16 from to me are actually symbolic of where we are with the  
17 challenges of climate change today, which is we  
18 simultaneously need to deal with its consequences and be  
19 prepared. And we need to keep working aggressively toward  
20 solutions. And there are these things where these two  
21 things overlap. The solar battery microgrids are both a  
22 solution and a response.

23           And let me just say it is imperative that we keep  
24 the electric grid reliable. I just -- we had a Germany-  
25 California symposium last week that I spoke at. And they

1 told me the grid in Germany, their average downtime  
2 annually is 12 minutes. It's highly, highly reliable.  
3 When we have these events, it makes it more difficult to  
4 advance our other goals, electric vehicles and the rest of  
5 that.

6 So I'm really, really proud, Laurie, of you and  
7 your team and all the great work you're doing with Vice  
8 Chair Scott to push R&D in these private projects.

9 Are there any questions or comments from  
10 Commissioners? I know we have a couple of public comments  
11 soon.

12 COMMISSIONER DOUGLAS: You know, I just had a  
13 brief comment, which is that I'm familiar with and really  
14 appreciate the good work that we just heard about. And we  
15 are building partners around the state through these  
16 research projects and through the work that we do.

17 I'd really love to see us continue to work on  
18 ways to take technologies that have been developed to help  
19 us meet our clean energy goals and deploy them as fast as  
20 we can in ways that are targeted to improve resilience,  
21 because I think that we have -- the technology is  
22 increasingly there.

23 And our research program continues to push the  
24 envelope and they continue to develop great ideas and tests  
25 and prove up really good concepts. But then sometimes

1 there's a lag between getting a concept that you know works  
2 and getting it out to the places that most need it quickly.  
3 And so it would be great to talk about how we can do more  
4 of that.

5           COMMISSIONER MONAHAN: And just quickly, we've  
6 invested in school busses and with Vice Chair Scott's  
7 foresight, those school buses have the possibility to give  
8 energy back to the grid and to be part of a resilient  
9 energy system. So I think it's now we have to be able to  
10 develop the right framework to be able to capitalize on  
11 that. And I think that's the work ahead for us and our  
12 investments on school buses.

13           CHAIR HOCHSCHILD: Great. Well, thank you.

14           And let me just thank again Justin Cochran, my  
15 Emergency Advisor, who was in the airport about to take off  
16 for his vacation when the last power shutoff started to  
17 heat up California. He came back and spent four or five  
18 days in the Emergency Operations Center, so sorry to ruin  
19 your vacation, but thank you for all your service.

20           I do have two public comments on this item.  
21 Let's hear first from Daniel Boatman from Grid Defender.

22           MR. BOATMAN: Good morning. Let me introduce  
23 myself. My name is Daniel Boatman and I represent a  
24 company that's a fledgling, but innovative inventor. His  
25 name is Dennis Bell. He's been working on a concept in his

1 brain for many years. He's got over 33 patents to his name  
2 and this particular company came into existence six years  
3 ago called Grid Defender. It's been the design and  
4 technology that he's developed has been peer-reviewed by  
5 six different universities. And the engineering behind it  
6 is very sound.

7           The principle is quite simple. It's applicable  
8 to either the existing grid or new construction within the  
9 grid. And it will help obviate potential fires and spark-  
10 type events that California has recently had extreme  
11 problems with.

12           The technology is such that we're at the point  
13 where we're looking for partners. And this was sort of the  
14 first public discussion of that company. And we're looking  
15 for partners and people of interest that would want to work  
16 with us in developing a working prototype and demonstrate  
17 to the public and for the ultimate public long-range  
18 benefit.

19           The specifics of the design are incorporated in  
20 the website. And I don't want to go into a long  
21 dissertation on how it works, but the essence of it is that  
22 the mechanical stresses on the lines can be calculated to  
23 disconnect the power. And then though the mechanical  
24 device that he has invented you can reconnect power in a  
25 quick manner. And that's what will contribute to

1 resiliency in the existing grid.

2 Do you have any other questions or comments for  
3 me at this time? I'll leave my card with the person at the  
4 front of you. Thank you.

5 CHAIR HOCHSCHILD: Thanks for coming.

6 Let's hear next from Steve Uhler.

7 MR. UHLER: Thank you, Commissioners and Chair.  
8 My name is Steve Uhler, U-H-L-E-R. There's a couple of  
9 items there that I'd like you to think about as I'm  
10 speaking to you. I want to bring this within 10 miles of  
11 us something that's sometimes it's a pole top extension.  
12 (phonetic) It changes a single phase into a three-phase,  
13 sometimes known as the chicken wing.

14 And then there is a photo of a tree capturing a  
15 service line. And then the package has a globe. If you  
16 inflate the globe and you breathe on it, that's where we  
17 live. That's from Buckminster Fuller. That gives you an  
18 idea of the perspective.

19 I believe quality goes hand-in-hand with  
20 resiliency. Quality management systems will help improve  
21 even the need for some of these other systems. Perhaps  
22 some of you are familiar with 737 MAX, a situation where a  
23 company that produces aircraft decides to not produce  
24 redundancy in a control system. Well, we're about the  
25 distance away from the installation of certain devices that

45

1 had removed the need for utilities to visit every service  
2 connection once a month. So wherein that photo of that  
3 service drop, if you were to age that, you would find out  
4 that that happened within that period.

5           Need to be careful, need to take on some quality  
6 management systems. Hopefully you remember some of my  
7 comments that were hopefully relayed by the Public Advisor  
8 that are related to quality management, such as Deming.  
9 Deming is an individual who Japan gives an award for  
10 quality. I'd like to know what the quality management  
11 system is that the Commission uses to ensure that even your  
12 own systems are managed on quality from noticing meetings  
13 properly and cancelling notices when they're required.

14           But in general it has to be ingrained to help  
15 control the situation and actually be willing to say maybe  
16 a mistake has been made. We need to return to a solution  
17 that was used by the engineers their mind as they developed  
18 the grid. And that's to ensure that every service  
19 connection gets visited in a routine that will prevent the  
20 type of items that are dealt with in my photo.

21           And think about sharing that earth thing with  
22 people, so they understand size. Thank you.

23           CHAIR HOCHSCHILD: Thank you, Mr. Uhler.

24           Okay. We do have one more comment, Bernadette  
25 Del Chiaro from CalSSA.

1 MS. DEL CHIARO: Good morning, Commissioners.  
2 Bernadette Del Chiaro, Executive Director of the California  
3 Solar & Storage Association, lovely to be today to make a  
4 brief comment. I didn't come here to speak to this agenda  
5 item. But I feel compelled to just mention that  
6 distributed solar and storage resources, whether they are  
7 microgridded or not, are a critical resource for resiliency  
8 for the State of California. Defined not only in terms of  
9 providing resiliency for consumers, be they schools or  
10 businesses or homeowners, but resiliency for the whole  
11 community as we aggregate and are able to rely on these  
12 resources, if we are able to deploy them at significant  
13 numbers. And we're just getting started.

14 So we need to make sure that we're not looking to  
15 critical supplies of petroleum as our most critical  
16 resiliency energy resource. We need to be looking to  
17 renewable energy resources for that. And again resiliency  
18 needs to be defined for the consumer as well as the grid.  
19 Thank you.

20 CHAIR HOCHSCHILD: Thank you.

21 Unless there's any further public comment,  
22 comments from Commissioners we'll move on to Item 4,  
23 Discussion of CEC Progress on the Joint Agency Report,  
24 Charting a Path to 100 Percent Clean Electricity Future, SB  
25 100.



1 MS. WEEKS: Good morning Chair and Commissioners.  
2 I'm Terra Weeks, Senior Advisor to Chair Hochschild and  
3 Project Manager for the SB 100 Joint Agency Report.

4 So we have now completed our three regional  
5 scoping workshops for the SB 100 Joint Agency Report.  
6 These were held in Fresno, Redding and Diamond Bar to  
7 engage the public and solicit initial feedback on the scope  
8 of the report.

9 Overall, I think the meetings went well and they  
10 were a good sign of stakeholder engagement. Across the  
11 three workshops we averaged about 40 people in the room and  
12 about 150 by WebEx. And each one had a significant amount  
13 of public comment.

14 Each workshop included presentations from local  
15 stakeholders to help frame some of the topics we're hoping  
16 to get feedback on and presenters included Mayor Rey Leon,  
17 from the City of Huron, the California Environmental  
18 Justice Alliance, Port of Long Beach, Blue Lake Rancheria  
19 who spoke to the aforementioned microgrid, Redding Electric  
20 and five of the California balancing authorities, among  
21 others.

22 The comment period on the scoping workshops just  
23 closed yesterday, so we're still reviewing them in detail.  
24 But some of the high-level messages that we've heard so far  
25 include a call for a diverse portfolio of resources as well

1 as a mix of in-state and regional resources;  
2 recommendations that specific technologies be included such  
3 as large hydros, small micro nuclear, hydrogen and  
4 bioenergy resources; incorporating resilience planning and  
5 addressing wild fire risk such as microgrids, interactions  
6 with the power shutoff protocols and planning for  
7 distributed versus centralized resources; the need to  
8 continue to address reliability and the importance of  
9 energy storage including long-term and seasonal storage and  
10 the critical importance of affordability and energy equity  
11 in implementing the policy.

12           A number of speakers also reiterated the need to  
13 work with community-based organizations for effective  
14 engagement.

15           So, looking ahead, we are hosting our next  
16 workshop next Monday, November 18th, at the PUC in San  
17 Francisco. And this will be an all day workshop focused on  
18 technologies and implementation scenarios. So this is  
19 where we'll begin the discussion of eligibility under zero  
20 carbon resources, which will be led by our colleagues at  
21 CARB. And CEC staff will also present unplanned modeling  
22 work for the report.

23           We'll also have presentations on a number of  
24 studies that provide directional insight into SB 100  
25 planning modeling, including the PUC's integrated resource

1 planning, E3's decarbonization study that they completed  
2 for Calpine, LA-100 by LADWP and Pathway 2045 by SoCal  
3 Edison.

4           In the afternoon we'll have panelists  
5 highlighting about a dozen technologies that fall under  
6 renewable generation, potential zero carbon generation and  
7 what we're calling enabling technologies, so including  
8 energy storage and demand flexibility. And panelists will  
9 discuss technical characteristics, technological innovation  
10 and market trends heading out to 2045.

11           Following the workshop next week, we'll have a  
12 little bit of a workshop break to incorporate scoping  
13 feedback into our planning and then resume workshops in the  
14 new year.

15           And lastly, I just wanted to take a minute to  
16 thank our staff for all their work hosting these scoping  
17 workshops and the kickoff workshops. It's been a lot of  
18 travel and logistics to make this all happen. So I just  
19 wanted to acknowledge the team including Siva Gunda,  
20 Aleecia Gutierrez, Mark Koostra, Liz Gill, Jim Bartridge  
21 and Le-Quyen Nguyen as well as our Public Advisor's Office,  
22 Noemi Gallardo and Rosemary Avalos, who have been  
23 coordinating all of our public comment. And lastly, our IT  
24 team, who has been joining the road show with us. So  
25 that's Raj Singh, Patty Pham, Jeremy Sherlock and Joseph

1 Smith.

2 It really has been a team effort, including our  
3 colleagues at CARB and PUC, so I just wanted to take a  
4 second to thank them. And we're really still just getting  
5 started. There's a lot of work left to do. But it's been  
6 a great team effort so far.

7 And now, open to discussion.

8 CHAIR HOCHSCHILD: Great, well thank you so much,  
9 Tara, for all your work and the rest of the team.

10 And the reality is we do get different public  
11 comment when we go to different parts of the state. We  
12 heard comments in Fresno and Diamond Bar and Redding and  
13 elsewhere that are different than you get here. And I  
14 think that that's part of the process to go out and  
15 solicit. So I'm really proud of all your work.

16 Other comments from Commissioners? Yeah. Go  
17 ahead.

18 VICE CHAIR SCOTT: I just had one additional  
19 thought on that, which is sparked from yesterday we saw "We  
20 Are the Land," which was a documentary that was put  
21 together on one of the solar projects. And one of the  
22 things that the tribal members within that movie had said  
23 was that they really wish that they had been contacted  
24 earlier about this.

25 And so it's not a super profound thought for you,

51

1 but I think we really want to make sure that we are  
2 reaching out to tribes, to low-income communities,  
3 disadvantaged communities, early and often to make sure  
4 that they have as much engagement as they would like in  
5 this space.

6 And I know that you all are working on that. But  
7 I just was really thinking about it yesterday after the  
8 movie.

9 COMMISSIONER DOUGLAS: Well, yeah. I missed some  
10 of your presentation. I had to step out to run to the  
11 bathroom. But I just -- I just was catching the end and  
12 Commissioner Scott's comments. I absolutely agree. You  
13 know, we do outreach and we reach people who know how to  
14 reach us or know how to track what we're doing, but the  
15 effort we make to go above and beyond that really pays  
16 dividends.

17 And so certainly in our SB 100 work and other  
18 work that we do, certainly as an example in the tribal  
19 program that we have -- we've gotten a lot more proactive  
20 about that outreach. And it makes a really big difference.  
21 And so thanks for all that work.

22 COMMISSIONER MCALLISTER: Yeah, so just briefly.  
23 I mean I'm always -- we travel a lot around the state and  
24 beyond. And it's incredible what a big diverse tapestry of  
25 a state we are in. And I was able to go to the kick-off

1 here in Sacramento, but then also up to Redding. And the  
2 Redding utility was a great host.

3 And I want to commend staff and organizers for  
4 getting really quality panelists and for getting them --  
5 just having a representation from an appropriate breadth of  
6 perspective. Up there, you know, it's rural. It's POU.

7 I mean obviously we had President Batjer was up  
8 there with us. And Genevieve Shiroma, the other PUC  
9 Commissioner was there. But also the ARB, the Balancing  
10 Authority of Northern California, local folks. We had Blue  
11 Lake Rancheria was up there. So that particular event was  
12 just very contextually appropriate for that place.

13 And I think we need to do more of that. We've  
14 been doing that for the efficiency work, the Action Plan  
15 for energy efficiency. Getting out is just invaluable.  
16 And hearing what people had to say in such a huge a huge  
17 diverse state with 40 million people, you know we're going  
18 to get it wrong in some place if we don't listen to pretty  
19 much every place. And so it's hard to generalize. There's  
20 no one size that fits all.

21 So particularly with SB 100, so I really  
22 appreciate all the effort. And keep it up. I think we  
23 need to dedicate the appropriate amount of resources to  
24 really getting out of the building and getting around the  
25 state.

1 MS. WEEKS: Great. Thank you.

2 CHAIR HOCHSCHILD: Yeah. And obviously what  
3 we're trying to do here is not just model the policy but  
4 model the process. And Tara and I were together in Los  
5 Angeles last week at our conference about 100 percent clean  
6 energy policies with 30 states represented. They're  
7 looking very closely at every aspect of what we're doing.  
8 And I feel really proud of how we're proceeding.

9 So thank you, Tara, for all your ongoing great  
10 work.

11 Let's move on to Item 5, Appliance Efficiency  
12 Regulations Rulemaking for General Service Lamps, Pat  
13 Saxton.

14 MR. SAXTON: Good morning Chair and  
15 Commissioners. My name is Patrick Saxton and I'm an  
16 electrical engineer in the Appliances Office in the  
17 Efficiency Division. I'm joined by Lisa DeCarlo an  
18 attorney with the Chief Counsel's Office.

19 Today, I'm presenting proposed changes to the  
20 California Appliance Efficiency Regulations for General  
21 Service Lamps.

22 The first part of this agenda item is a Proposed  
23 Negative Declaration finding that there are not significant  
24 adverse effects on the environment from the proposed  
25 regulations. There is a 30-day public comment period for

1 the Negative Declaration. However no comments were  
2 received.

3 At the conclusion of this presentation staff will  
4 request approval of the Proposed Negative Declaration.

5 I'll provide a short background on general  
6 service lamps. California has an existing standard  
7 requiring a minimum efficacy of 45 lumens per watt for  
8 general service lamps. But it has only been enforced on A-  
9 shaped lamps, essentially traditional light bulbs. This  
10 standard was adopted by the CEC in 2008 with a contingent  
11 effective date of January 1, 2018. The standard  
12 implemented and became effective when the United States  
13 Department of Energy, or DOE, failed to meet congressional  
14 directives on general service lamps. These actions were  
15 taken pursuant to California's exceptions to preemption  
16 that are found in the United States Code.

17 The result of enforcing this standard, typically  
18 called the backstop standard, was removal of Halogen A-  
19 lamps from California's market, leaving light emitting  
20 diode or LED lamps, and compact florescent lamps or CFLs.

21 The U.S. DOE published two final rules that  
22 established new and revised definitions related to general  
23 service lamps in the Federal Register on January 19th,  
24 2017. And while the current definitions for general  
25 service lamps already incorporates the 2017 Federal Revised



1 Definitions, staff proposes here to memorialize them into  
2 the California Appliance Efficiency Regulations, as allowed  
3 by California's exceptions to preemption for general  
4 service lamps in U.S. Code.

5           After staff released its notice of proposed  
6 action in this proceeding, DOE purported to withdraw its  
7 definitions. On November 4th, 2019 15 State Attorneys  
8 General, including California's as well as Washington D.C.  
9 and the City of New York, filed a legal challenge to DOE's  
10 purported withdrawal of its January 19th, 2017 expanded GSL  
11 definitions.

12           A separate legal challenge on the same issue was  
13 filed by the Natural Resources Defense Council, Sierra  
14 Club, Consumer Federation of America, Massachusetts Union  
15 of Public Housing Tenants, Environment America and the U.S.  
16 Public Interest Research Group.

17           The proposed regulations clarify the types of  
18 lamps to which the existing state backstop standard for  
19 general service lamps applies. The existing 45 lumens per  
20 watt standard, which is not being amended, cannot be met by  
21 incandescent or halogen lamps. The California market would  
22 be served by LED and CFL lamps which are readily available,  
23 provide equal service, are much higher efficiency resulting  
24 in large utility bill savings and they last much longer.

25           This is the definition for general service lamps.

1 The highlights are that it increases the number of base  
2 types meeting the state definition of general service  
3 lamps, expands the voltage range and increases the maximum  
4 lumens output or brightness. General service lamps include  
5 but are not limited to general service incandescent lamps,  
6 CFLs and LEDs.

7           Notably, several important lamp types are no  
8 longer exempt from the state definition of a general  
9 service lamp. These lamp types are either products with  
10 high sales volumes that are actually used in general  
11 lighting applications or represent substitute products that  
12 could be used in general lighting applications.  
13 Discontinued exemptions for reflector lamps and certain  
14 lamp shapes such as candle shaped are particularly  
15 important.

16           Twenty-six lamp types continue to be exempt from  
17 the state definition of general service lamps. But these  
18 are truly specialty lamps. Examples are appliance lamps,  
19 black light lamps, bug lamps, colored lamps and 22 other  
20 types.

21           The proposed regulations also include  
22 clarification of the definition for general service  
23 incandescent lamps and supplemental definitions.

24           This chart shows the results of staff cost  
25 effectiveness analysis for replacing various lamp types

1 with more efficient LEDs that are available on the market.  
2 Incremental prices for LED lamps are generally low and  
3 continue to come down. Staff used conservative assumptions  
4 meaning higher incremental prices. Four of these five lamp  
5 types have a simple payback period of less than one year.  
6 And the fifth type has a simple payback of about two years.  
7 The lifetime utility bill of electricity savings ranges  
8 from \$50 to \$90 per lamp.

9           This slide shows two scenarios estimating  
10 statewide savings from the market shift from low efficiency  
11 lamp types to high efficiency lamps. The scenario for low  
12 LED market saturation was developed for the 2018 staff  
13 report on general service lamps. The high LED market  
14 saturation was developed as part of a supplemental analysis  
15 based on comments received during the pre-rulemaking that  
16 the LED market share was higher than staff original  
17 assumptions.

18           There's a large range of savings resulting from  
19 the full shift of the market to high efficiency lamps  
20 depending on the assumptions of current LED market  
21 saturation.

22           Industry has commented that they believe even the  
23 high LED saturations scenario overestimates statewide  
24 savings. Even if that is the case, it does not impact the  
25 technical feasibility or cost effectiveness of replacing

1 low efficiency lamps with high efficiency lamps.

2           Comments supporting the proposed regulations have  
3 been received from energy efficiency, environmental,  
4 ratepayer and consumer organizations and utilities that are  
5 shown on the screen here.

6           GE Lighting, LEDVANCE and the National Electrical  
7 Manufacturer's Association have filed comments opposing the  
8 proposed regulations. Their comments suggest that the CEC  
9 should stop this proceeding, because DOE has withdrawn  
10 their definitions for general service lamps, because the  
11 market transition to LEDs is occurring quickly and in their  
12 opinion regulations are not necessary. And because DOE has  
13 stated, in DOE's opinion, California's exception to  
14 preemption are not available. Staff strongly disagrees  
15 with these comments.

16           Additionally an out of scope comment on portable  
17 luminaires was received.

18           Staff finds that the proposed regulations provide  
19 clarifications that are technically feasible and cost  
20 effective. And that California's exceptions to preemption  
21 for general service lamps in U.S. Code Title 42, Section  
22 6295(i)6(a) are operative and applicable.

23           Staff requests approval of the Negative  
24 Declaration and the proposed regulations. I'm available  
25 for any questions.

1 CHAIR HOCHSCHILD: Thank you, Pat.

2 Commissioner McAllister, did you want to?

3 COMMISSIONER MCALLISTER: Do we have any public  
4 comment?

5 CHAIR HOCHSCHILD: Should we do the public  
6 comments on this, yeah sure. Thank you, Pat. Let's do  
7 public comments starting with those in the room, Noah  
8 Horowitz, from NRDC.

9 MR. HOROWITZ: Good morning, Commissioners and  
10 staff. My name is Noah Horowitz. And I'm the Director of  
11 the Center for Energy Efficiency Standards at the Natural  
12 Resource Defense Council, NRDC.

13 I'm here today to express our strong support for  
14 the CEC proposal to update the state standards for general  
15 service lamps or every-day light bulbs, more commonly  
16 known. The update includes three essential components, the  
17 test method, the definition of scope and the minimum  
18 efficiency requirements. And we believe the CEC got it  
19 right in all three cases.

20 To be mindful of time, I'd like to make four key  
21 points. One, scope and definition really do matter. CEC's  
22 current lighting regulations only cover the bulbs that go  
23 into roughly half of the sockets in existing homes in  
24 California. CEC's proposal which mirrors the 2017 updated  
25 definition by DOE brings into scope key bulb types which

60

1 include three-way bulbs, candle and flame shaped bulbs in  
2 our chandeliers and sconces, reflector bulbs in our  
3 recessed cans and down lights and the round globe bulbs  
4 often in our bathroom fixtures.

5 In some cases these might be the only bulb used  
6 in the room and they're not some sort of niche or specialty  
7 bulb as NEMA and its member often incorrectly allege.

8 Secondly, it's critically important to phase out  
9 the remaining inefficient light bulbs in our homes.  
10 Incandescents and halogens consume four-to-six times more  
11 energy than the LED bulbs that replace them while giving  
12 off the same amount of light. Given the many millions of  
13 sockets in California homes that still contain an  
14 inefficient light bulb, adopting the 45 lumen per watt  
15 backstop for bulbs not yet covered by California standards  
16 will deliver massive energy and carbon savings to the  
17 state.

18 As a result of these new regulations virtually  
19 all bulbs in California will soon be efficient ones,  
20 resulting in annual energy savings as Pat has shown,  
21 between roughly 750 million and more than \$2 billion per  
22 year.

23 In addition, millions of tons of greenhouse gas  
24 emissions and other pollutants will be prevented annually.

25 Three, we support CEC's proposal to update the

1 test methods for measuring the energy use and light output  
2 of the GSLs including LED lamps, so as to align with the  
3 federal ones.

4 And four and finally, we urge the CEC to maintain  
5 the date of sale, effective date of January 1, 2020, which  
6 aligns with the backstop date contained in the 2007 Federal  
7 Energy Bill.

8 Unlike other state and federal appliance  
9 efficiency standards, which utilize the date of  
10 manufacturer or a date of import prohibition the backstop  
11 and ICE, (phonetic) or the Energy Independence and Security  
12 Act -- I didn't make up that name -- uses a date of sale  
13 effective date. This means that retailers may not sell  
14 through their existing inventories of incandescents and  
15 halogens as of January 1st.

16 While January 1 is just around the corner, the  
17 lighting industry and retailers have known for years that  
18 these standards were coming and some have chosen at their  
19 potential peril to ignore or oppose them.

20 CHAIR HOCHSCHILD: If you could wrap up.

21 MR. HOROWITZ: Okay. The date of sale compliance  
22 mechanism also makes enforcement much faster and  
23 representatives of the CEC can simply look at the bulb and  
24 know whether or not it complies.

25 So in closing, we commend the CEC for moving

1 forward with its proposal and doing its part to ensure the  
2 transition away from energy wasting light bulbs is  
3 completed in California as soon as possible. Thank you.

4 CHAIR HOCHSCHILD: Thank you.

5 Let's move on to Mary Anderson, PG&E on behalf of  
6 the California IOUs.

7 MS. ANDERSON: Good morning, it's almost  
8 afternoon. My name is Mary Anderson from PG&E speaking on  
9 behalf of the California IOUs. I am pleased to be here to  
10 urge the Energy Commission to adopt the expanded general  
11 service lamp definition into Title 20, California Appliance  
12 Efficiency Regulations.

13 The State of California has championed forward  
14 looking lamp standards for over a decade, first through the  
15 implementation of state GSIL standards and then through the  
16 adoption of the 45 lumens per watt backstop for GSLs. Now  
17 California seeks to complete the transition to a high  
18 efficiency lamp type through alignment with DOE's lawfully  
19 expanded definition of GSLs.

20 By implementing these regulations on Jan 1, 2020,  
21 along with the already effective backstop the Energy  
22 Commission will ensure that Californians realize an  
23 anticipated 1.4 quadrillion BTUs of energy savings through  
24 2050. The California investor owned utilities urge the  
25 Energy Commission to adopt these definitions and implement

63



1 them as planned to secure the front-loaded savings afforded  
2 by this rule making. Thank you.

3 CHAIR HOCHSCHILD: Thank you.

4 I think that's everybody in the room. Let's move  
5 on to the public comment on the phone starting with Mel  
6 Hall-Crawford, if I'm pronouncing that correctly, Consumer  
7 Federation of America.

8 MS. HALL-CRAWFORD: Yes, hi. Good morning, Chair  
9 and Commissioners. I hope you can hear me, I have a little  
10 bit of an echo.

11 My name is Mel Hall-Crawford. I am the Director  
12 of Energy Programs for the Consumer Federation of America.  
13 CFA is a federation of some 250 non-profit organizations  
14 working in the consumer interest through research, advocacy  
15 and education.

16 I am pleased to speak in support of the  
17 Commission's adoption of the revised 2017 federal  
18 definitions for GSLs, general service lamps. Consumer  
19 Federation, the Consumer Federation of California, Consumer  
20 Action and Consumer Reports together submitted comments  
21 into the docket in favor of the Commission's proposed  
22 action, so I will just highlight the points made.

23 Over the past decade, we have managed to increase  
24 the amount of light in our lives with declining electricity  
25 consumption and bills.

1           The proposed action by the CEC will further  
2 benefit California consumers and businesses. As previously  
3 point out, it is projected to save them between \$736  
4 million and \$2.4 billion in annual savings after the  
5 existing stock turns over and there are also important  
6 benefits for the environment.

7           In addition, there are broader economic benefits  
8 when the commercial and industrial sectors save on lighting  
9 costs, consumers benefit through lower costs in goods and  
10 services.

11           We greatly appreciate the CEC's leadership in  
12 energy efficiency. You serve as a beacon for the rest of  
13 the country. CFA urges you to adopt the 2017 federal  
14 definitions for GSILs and GSLs.

15           Thank you for this opportunity to speak.

16           CHAIR HOCHSCHILD: Thank you. You were fading in  
17 and out there, but I think we got about 80 percent of that.  
18 Thank you.

19           Let's move on to Christopher Granda, Appliance  
20 Standards Awareness Project.

21           MR. GRANDA: Yes, good morning. This is Chris  
22 Granda calling from the Appliance Standards Awareness  
23 Project. I am a Senior Researcher Advocate and staff  
24 member responsible for our lighting technologies.

25           The Appliance Standards Awareness Project

1 applauds California's history of light bulb energy  
2 efficiency standards, and supports the CEC's expansion of  
3 the definition of general service lamps as contained in the  
4 Negative Declaration. This expansion of California's  
5 definition for general service lamps will make California  
6 regulations consistent with similar state standards in  
7 Vermont, Nevada, Washington State and Colorado. And with  
8 federal standards that are due to come into effect  
9 prohibiting the sales of non-compliant general service  
10 lamps starting January 1st, 2020.

11           The U.S. Department of Energy has issued a rule  
12 withdrawing the expansion of the federal definition, but we  
13 believe that this action was illegal and will be overturned  
14 in court pending the resolution of the lawsuits mentioned  
15 by Mr. Saxton in his presentation.

16           By expanding the California definition of general  
17 service lamps, and enforcing the standard under this  
18 broader scope, California will save significant amounts of  
19 electricity, save lightbulb users large amounts of money,  
20 reduce carbon emissions from electricity generation and  
21 mitigate the confusion and inconvenience that the  
22 Department of Energy's recent actions have caused for  
23 manufacturers, retailers, and consumers of light bulbs.

24           The effect of the California Energy Commission's  
25 proposed changes will be to accelerate the transition from

1 incandescent and other legacy light bulb technologies to  
2 light emitting diodes. We see only benefits to California  
3 consumers and the environment from this change.

4 In addition to the savings in dollars, kilowatt  
5 hours and carbon, and reduction in other impacts, we  
6 anticipate no reduction and the availability of different  
7 lamp types to consumers.

8 California's general service lamps standards  
9 came into effect smoothly in 2018, and since then we have  
10 seen many new kinds of LED light bulbs come to the market.  
11 And new manufacturers enter the market to serve consumer  
12 demand for these products as well.

13 Thank you for the opportunity to share these  
14 comments.

15 CHAIR HOCHSCHILD: Thank you.

16 Let's move on to Daniel Buch from the Public  
17 Advocate's Office.

18 MR. BUCH: Thank you for the opportunity to speak  
19 today. My name is Dan Buch and I'm the Supervisor of the  
20 Energy Customer Programs Team at the Public Advocates  
21 Office at the California Public Utilities Commission.

22 The Public Advocates Office strongly supports  
23 approval of this item, which will solidify California's  
24 continuing leadership in Energy Efficiency and lock in a  
25 very significant stream of highly cost-effective energy

1 savings from lighting, reducing greenhouse gas emissions  
2 and ensuring bill savings for customers. It is imperative  
3 that California continue to lead the way in fighting  
4 climate change.

5           If the federal government continues to abrogate  
6 its duty to enforce cost-effective lighting standards that  
7 protect the environment and save customers money, it is  
8 necessary and appropriate that the State of California step  
9 in to achieve these important goals.

10           California's regulatory agencies and utilities  
11 have been planning for this set of lighting standards for  
12 many years, supporting the state's energy and environmental  
13 goals through a systematic effort to transform the lighting  
14 market. Charting a path to broad, cost effective and  
15 highly efficient lighting standards has been the planning  
16 goal since the early 2000s. California ratepayers have  
17 contributed hundreds of millions of dollars in subsidies  
18 and programmatic efforts to spur market development,  
19 quality improvements and price reductions.

20           And we have achieved those market transformation  
21 goals. Highly efficient lighting is now widespread high  
22 quality and inexpensive. The most recent CPUC goals and  
23 potential studies show that there is little remaining space  
24 for an incentive-led efficiency gains in lighting. And no  
25 reason to continue incentivizing lighting measures that

1 consumers would largely adopt regardless of whether  
2 incentives are offered or not. And so it is appropriate  
3 for ratepayers to wind down their financial commitment and  
4 for compulsory standards to take over.

5           Based on the most recent potential end goals  
6 studies the CPUC now expects dramatic reductions in  
7 lighting incentives starting in 2020 and the Public  
8 Advocates Office strongly supports that direction. So as  
9 of January 1, 2020 the lighting products covered by this  
10 regulation will be included in a standard practice baseline  
11 in most applications. And investor owned utilities and  
12 other energy efficiency program administrators regulated by  
13 the CPUC will no longer offer incentives or subsidies.  
14 This is reflected in CPUC decisions, investor owned utility  
15 energy efficiency business plans and regulatory filings and  
16 CPUC and CEC energy savings and procurement planning  
17 forecasts.

18           This is the right policy. It safeguards  
19 ratepayers from paying for energy savings that would occur  
20 without subsidy. And it allows the CPUC to direct needed  
21 resources to transforming new markets and initiatives like  
22 building decarbonization. And importantly, CPUC policy  
23 sunsetting incentives for lighting is not legally dependent  
24 on standards approval. The Public Advocates Office  
25 anticipates that even if these standards were to face legal

1 challenge, the sunseting of lighting incentives would  
2 continue to be CPUC policy. We do not anticipate nor would  
3 we support a resumption of ratepayer funding for lighting  
4 after January 1, 2020.

5 Thank you for the opportunity to speak at this  
6 meeting and your continued leadership in energy efficiency.

7 CHAIR HOCHSCHILD: Thank you.

8 Let's move on to Laura Gildengorin. Thank you,  
9 let's move on to Laura Gildengorin, California Association  
10 of Ratepayers for Energy Savings.

11 MS. GILDENGORIN: Thank you, Commissioners. My  
12 name's Laura Gildengorin and I'm speaking on behalf of the  
13 California Association of Ratepayers for Energy Savings,  
14 commonly known as CARES. CARES is a nonprofit association  
15 of California ratepayers dedicated to affordable and  
16 sustainable energy, on a mission to create and maintain a  
17 healthy environment for all Californians.

18 CARES is participating in today's meeting,  
19 because it wants to show its strong support of the CEC's  
20 proposed action to expand the GSL definition to be  
21 coextensive with the Obama-era federal definition including  
22 the 45 lumens per watt efficacy standard and updating the  
23 relevant test procedures. What I will refer to as the  
24 CEC's proposed action.

25 Ask California energy ratepayers, CARES members

1 have two main concerns. The first, preserving the  
2 environment we all live in. And second, saving money on  
3 their energy costs. The CEC's proposed action addresses  
4 both those concerns and makes tremendous improvements to  
5 California energy policy. By our estimates, conserving up  
6 to 13,600 gigawatt hours of and saving consumers an average  
7 of \$210 per household per year. Those are meaningful  
8 savings that Californians simply don't have the luxury of  
9 giving up.

10 As Mr. Saxton mentioned, the CEC's proposed  
11 action is expressly provided for in the language of the  
12 Energy Independence and Security Act of 2007 in  
13 California's preemption exceptions. And is undoubtedly  
14 the next progressive step towards significant financial  
15 relief and environmental protections.

16 For these reasons, and those stated in the CARES  
17 comment letter, CARES fully supports the CEC's proposed  
18 action. Thank you for your time.

19 CHAIR HOCHSCHILD: Thank you.

20 I think that concludes public comment. Let's  
21 move on to Commissioner McAllister.

22 COMMISSIONER MCALLISTER: Okay. Thanks, Chair  
23 Hochschild.

24 So thanks Pat for that presentation and all the  
25 commenters for being here on the line today. I just have a



1 brief statement really. I certainly would echo the  
2 historical context mentioned by some of the commenters. I  
3 believe this item fits perfectly within California's  
4 history along these lines as well as federal history, and  
5 our history collaboration with the federal government to  
6 promote efficient lighting.

7           Here, we are doing exactly what we have said we  
8 would do since essentially 2007, and certainly since 2017.  
9 This is a straight conformance item with the proper federal  
10 GSL definition. The backstop applies and anti-backsliding  
11 provisions also apply. Commission staff and Chief Counsel  
12 will continue to support the Attorney General's Office in  
13 its efforts in the courts together with other state  
14 partners.

15           So in sum, this rulemaking clarifies the scope of  
16 our enforcement authority. It does not establish new or  
17 amended regulations. This merely clarifies the scope to  
18 which our existing 45 lumens per watt standard applies.

19           I commend the lighting industry to take note of  
20 that. I want to thank staff and then Counsel, certainly  
21 CCO's Office, the Executive Office as well, for all of  
22 their leadership and collaboration on this. So I strongly  
23 support this item.

24           CHAIR HOCHSCHILD: Thanks. Any other comments  
25 from Commissioners?

1           Hearing none, is there a motion?

2           MS. HOUCK: Chairman? Just really quick before  
3 you vote, I noted that there is a typo in the agenda. That  
4 it should be Title 20, Section 1004, not 1007. The docket  
5 number is correct and all the backup material has the  
6 correct code, but I just want it to be clear for the record  
7 for the vote.

8           CHAIR HOCHSCHILD: Thank you for catching that,  
9 Darcie. So with that correction --

10          COMMISSIONER MCALLISTER: We have to do a  
11 Negative Declaration and then the motion itself, right?

12          MS. DECARLO: Yes, correct. In that order.

13          COMMISSIONER MCALLISTER: Okay. So I'll move  
14 Item 5 Negative Declaration.

15          CHAIR HOCHSCHILD: Okay. Is there a second?

16          COMMISSIONER DOUGLAS: Second.

17          CHAIR HOCHSCHILD: All in favor say aye.

18          (Ayes.)

19          CHAIR HOCHSCHILD: That motion passes  
20 unanimously.

21          COMMISSIONER MCALLISTER: I'll move Item 5b.

22          VICE CHAIR SCOTT: Second.

23          CHAIR HOCHSCHILD: Second by Vice Chair Scott.  
24 All in favor say aye.

25          (Ayes.)

1 CHAIR HOCHSCHILD: All right, that motion passes  
2 unanimately. Thank you.

3 MR. SAXTON: Thank you.

4 CHAIR HOCHSCHILD: Thank you to the staff for all  
5 the work on that.

6 Let's move on to Item 6, Sacramento Municipal  
7 Utility District Community Solar Program.

8 MR. PENNINGTON: Good morning, Commissioners. My  
9 name is Bill Pennington. I'm here today to present staff's  
10 review of SMUD's application to administer a CEC-approved  
11 community solar program for showing compliance with the  
12 2019 Building Standards' onsite PV requirements.

13 In 2008, in collaboration with the PUC and ARB,  
14 the Energy Commission launched a 10-year effort to require  
15 both high energy efficiency in solar in new homes by 2030.  
16 That effort culminated in 2018 with CEC adoption of the  
17 first Building Standards in the U.S. to do this. This  
18 accomplishment established an entirely new class of homes  
19 in the state. In one fell swoop, it cut in half the energy  
20 consumption of California new homes and simultaneously cut  
21 the carbon footprint in half. It also took the first steps  
22 to make these homes demand flexible.

23 Throughout the 10-year period the CEC IEPRs gave  
24 guidance regarding how to establish these new standards.  
25 the 2015 IEPR called for the creation of an option for

1 builders to be able to use offsite solar instead of rooftop  
2 solar as a necessary feature of the entire standards.

3           In meeting this IEPR guidance it was recognized  
4 that rooftop solar had many important attributes that had  
5 given builders the ability to differentiate their product  
6 in the market. Many builders have incorporated rooftop  
7 solar in their homes in response to strong consumer demand  
8 for these attributes. That consumer demand will not  
9 disappear due to establishing an offsite solar option. It  
10 will be up to the marketplace to sort out, which is the  
11 better choice for any individual home.

12           The IEPR established a limited set of criteria  
13 that community solar should meet and it's on the slide  
14 here. It must be administratively workable for building  
15 departments, the CEC and others involved. It must be cost  
16 effective. Being served by community solar cannot result  
17 in a home's energy bills being higher than a regular  
18 utility customer's energy bills.

19           The community solar resource must exist at the  
20 time the home was permitted. The building department must  
21 be able to verify the community solar during the same time  
22 period they are verifying the other features of the home.  
23 Community solar output that is assigned to the home must  
24 offset the energy use that would have occurred with the  
25 rooftop system. And the community solar output must be

1 dedicated uniquely to the new home. Double-counting cannot  
2 be allowed.

3           Establishing the compliance option for community  
4 solar, staff made sure to address these IEPR guidelines.  
5 Staff first evaluated several existing or hypothetical  
6 approaches for delivering offsite solar compared to the  
7 IEPR guidance. These approaches considered different  
8 potential administrators of a community solar program  
9 including utilities, builders, solar developers or local  
10 governments. None of the approaches that existed in  
11 California at that time, or that we thought about  
12 hypothetically, met all of the IEPR guidance.

13           Staff proposed setting performance criteria in  
14 the regulations that align with the IEPR guidance, enabling  
15 any entity to come forward with a community solar program  
16 that met the criteria to qualify for CEC approval. Staff  
17 wanted to set up the most flexible approach possible with  
18 the hope that someone would bring forward a community solar  
19 program that met the IEPR guidance.

20           Staff did not add any additional criteria that  
21 would limit that flexibility. There were no minimum or  
22 maximum requirements for how big the community solar  
23 resource had to be. There were no requirements regarding  
24 where the community solar resource had to be located.  
25 There was no requirement that the community solar resource

1 had to be new at the outset of the program. There was no  
2 requirements that the community solar resource had to  
3 provide any other attributes.

4           It might be good to recognize this is a  
5 performance standards option, and the sole metric for  
6 determining performance standards options that plays  
7 throughout the standards is energy use. And so basically  
8 the community solar needs to fundamentally match the energy  
9 use. There may be a whole bunch of other attributes in the  
10 world related to features that might be useful and  
11 productive, but those don't play and the Commission doesn't  
12 regulate them in general for performance standards  
13 compliance options.

14           So staff has reviewed the SMUD application  
15 against the requirements set in the regulations the  
16 qualifying for CEC approval. the following two slides I am  
17 going to show here walk through that review.

18           SMUD commits to meet all of the enforcement  
19 agency requirements making sure that the resources exists  
20 at the time of permit and avoiding unnecessary effort on  
21 the part of the building department.

22           SMUD commits to meeting the energy performance  
23 requirements demonstrating that the energy performance of  
24 the community solar resource meets or exceeds the  
25 performance of rooftop solar on each home.

1           SMUD commits to working with staff to properly  
2 model the community solar resource and compliance software.

3           SMUD commits to meeting the dedicated energy  
4 savings requirement, making sure that the community solar  
5 output results in the correct energy savings being  
6 dedicated to the home. SMUD guarantees that the home's  
7 energy bills will be reduced by more than the cost for the  
8 home to participate. This is not a premium program.

9           SMUD commits to meeting the durability  
10 requirements, ensuring that the community solar output will  
11 be dedicated to the home for 20 years.

12           SMUD will require the builder to record CCNRs  
13 that run with the land in the deed transferring title for  
14 each participating home. SMUD also requires the builder to  
15 provide disclosure to all perspective buyers regarding the  
16 20-year obligation for their home.

17           SMUD commits to meeting the additionality  
18 requirement, ensuring that the community solar allocation  
19 to the home is in no way double counted. This requirement  
20 means that the community solar allocation cannot at the  
21 same time serve the home, and also be used for other  
22 purposes. The energy savings benefits cannot be  
23 simultaneously attributed to other homes or transferred  
24 away from the home. SMUD makes several commitments to  
25 ensure no double counting.

1           SMUD commits that the community solar allocation  
2 to the home will not be used for meeting RPS. SMUD will  
3 retire bundled recs on behalf of each home using separate  
4 WREGIS accounts to track the community solar shares. SMUD  
5 will obtain certification from the Center for Resource  
6 Solutions national greening program, which includes an  
7 annual independent audit to verify no double counting.

8           SMUD will retire carbon allowances on behalf of  
9 each home through ARB's voluntary renewable energy program.  
10 Also, SMUD with all RPS rules, both in statute and in CEC  
11 regulations.

12           SMUD commits to meeting all of the accountability  
13 and record-keeping requirements, maintaining records,  
14 demonstrating compliance with the CEC's requirements for a  
15 period of 20 years for each participating home. SMUD will  
16 provide access to anyone that the CEC approves to check  
17 that SMUD is complying with CEC requirements.

18           After a thorough review of the SMUD application,  
19 staff finds that it makes all of the CEC's regulatory  
20 requirements. Both for CEC approval of their community  
21 solar program, and for approval of SMUD as the  
22 administrator to make sure that there is ongoing compliance  
23 with the requirements for a period of 20 years for each  
24 participating home.

25           Staff recommends approval of SMUD's application.



1 That concludes my presentation and I would be glad to  
2 answer any questions.

3 CHAIR HOCHSCHILD: Thank you.

4 Why don't we, unless there are immediate  
5 questions, turn to SMUD if you would like to make some  
6 opening comments, Tim?

7 MR. TUTT: Thank you, Chair, Commissioners.

8 I'd like to start off just by thanking the staff  
9 for working well with us over the last 18 months as we  
10 prepared this application. It was a pleasure to go through  
11 the back and forth with them and get the details of the  
12 application right to meet all the requirements.

13 I would like to say SMUD has a strong and long  
14 commitment to solar power. We have 210 megawatts of  
15 customer rooftop today and we expect that to grow to over  
16 500 megawatts by 2030. In our integrated resource plan  
17 that we provided to the Energy Commission, we are expecting  
18 to add 1500 megawatts of utility-scale solar by 20140, with  
19 1,000 megawatts of that locally.

20 And I would like to say that you may have heard  
21 that this is incompatible with the mandate. I don't think  
22 that's the case. The mandate adds solar, is triggered by  
23 the construction of a new low-rise family home or building.  
24 And that solar can be added either as rooftop or through an  
25 approved community solar option as staff has suggested. So

80

1 in either case, solar will be added to California's amount  
2 of renewable generation, carbon reductions will occur.

3 We do have to have some resources that exist at  
4 the time the first house signs up for the program,  
5 otherwise we can't serve the program. So we have existing  
6 resources as a bridge and as a backup in case one of our  
7 new resources that are being constructed, and were procured  
8 in part to serve these SolarShares applications or  
9 offerings that we have, has a problem and can't generate.  
10 We have a backup in the portfolio of resources that we  
11 have.

12 Nevertheless, we are adding significant new  
13 resources to serve this program, 87 percent of our  
14 portfolio is local. Over half of it is new, under  
15 construction today. We expect additional new solar to be  
16 constructed and our service territory as the years go on  
17 oh, so that we continue to be able to supply this program  
18 with new solar.

19 We will be retiring recs as staff suggested in  
20 WREGIS, and we fully expect that all of the recs will  
21 likely be from new resources when we retire at them.

22 Thank you, and we urge your approval of the  
23 application.

24 CHAIR HOCHSCHILD: Great, thank you.

25 Let's move on to public comment starting with Bob

1 Raymer from CBIA.

2 MR. RAYMER: Thank you, Mr. Chairman,  
3 Commissioners. I'm Bob Raymer representing the California  
4 Building Industry Association. And for the sake of time,  
5 I've also been asked to testify on behalf of the Business  
6 Properties Association, the Building Owners and Managers  
7 Association and most importantly, the California Apartment  
8 Association who has a distinct interest in the community  
9 solar option.

10 The CEC's adoption of a solar mandate for new  
11 homes and apartments represents the most significant change  
12 to our state Building Code in the history of our state  
13 Building Code. And I have been there for most of the  
14 history of the state Building Code.

15 Leading up to the adoption in May of 2018, the  
16 CEC had to balance several competing and urgent priorities,  
17 significantly reduce greenhouse gas reductions, emissions  
18 in new residential construction and do it in a way that  
19 does not derail California's recovery from the worst  
20 housing crisis in the state's history. At the end of the  
21 day you did it, recognizing that in a state the size of  
22 California one size does not fit all.

23 CEC worked with industry and other stakeholders  
24 to provide us with a full range of compliance options. In  
25 general terms, the CEC has allowed us three compliance

1 paths to meeting the solar mandate. Each of these three  
2 options has their pros and cons. The for sale (phonetic)  
3 option costs the most, but the home buyer gets 100 percent  
4 of the solar benefit. The lease option doesn't impact the  
5 upfront costs, but then the buyer doesn't get the full  
6 benefit of the solar. And in those cases where the builder  
7 needs to comply with the mandate without putting solar on  
8 the roof, there's the community solar option.

9           Each of these three options are needed, and most  
10 importantly each of these three options significantly  
11 reduces the greenhouse gas emissions associated with a  
12 dwelling construction. And at the end of the day that is  
13 the single most important goal of the new solar mandate.  
14 And as the term applies, all three of these compliance  
15 paths are options that the builder can choose depending on  
16 their needs and market strategy.

17           The SMUD SolarShares Program, in our view, is a  
18 good example of one approach to providing community solar,  
19 but it's certainly not the only approach. My industry  
20 strongly supports the SMUD SolarShares Program. This  
21 support should not be construed as the preferred method of  
22 providing community solar. It is simply a method of  
23 providing community solar, but we do support it. And at  
24 the present time it is the only community solar program  
25 being considered by the CEC.

1           We anticipate that many other private entities  
2 besides utility companies will be submitting requests for  
3 certification of their community solar program. For  
4 example, it is highly likely that developers will be  
5 partnering with third-party solar providers and local  
6 jurisdictions in the future establishment of community  
7 solar programs. And CBI hopes that happens much sooner  
8 than later.

9           California's new solar mandate takes effect in  
10 January 2020, and the SMUD SolarShares Program is the only  
11 Community solar presently under consideration by the CEC at  
12 that point.

13           CBIA supports CEC certification of this program  
14 and we will strongly support certification other private  
15 entities who submit Community solar programs in the future.

16           And I would like to leave you with two thoughts,  
17 California will see approximately 10,000 fewer units,  
18 dwelling units built in 2019 than we did in 2018, so  
19 California's housing crisis is with us for the long term.  
20 It's unfortunate, but that is with us for the foreseeable  
21 future.

22           And lastly, thanks in large part to the recent  
23 public safety power shutoffs, the marketability of rooftop  
24 solar and battery storage is going to surge in the  
25 foreseeable future. I have been inundated with calls from

1 both the media and our own members about pairing these two  
2 devices. So the for sale option paired with battery is  
3 here to stay. I do not see community solar overtaking that  
4 any time soon. Thank you.

5 CHAIR HOCHSCHILD: Thank you.

6 Let's move on to Bernadette Del Chiaro from the  
7 California Solar & Storage Association to be followed by Ed  
8 Smeloff from Vote Solar.

9 MS. DEL CHIARO: Commissioners, thank you again  
10 for giving me the opportunity to present before you today.  
11 Again, my name is Bernadette Del Chiaro. I'm the Executive  
12 Director of the California Solar & Storage Association. We  
13 are a 40-year-old business group, the largest and oldest  
14 clean energy business group in California representing over  
15 500 manufacturers and installers, building California's  
16 clean energy future roof by roof and farm by farm.

17 We're here in strong opposition to the SMUD  
18 proposal before you and ask you to vote no. There are  
19 three main reasons for that. One is the SMUD proposal will  
20 not necessarily bring new renewable energy online for the  
21 State of California. According to SMUD's own documents,  
22 they have enough solar already installed in their projects  
23 and ready to be allocated to cover all the anticipated new  
24 construction in the SMUD territory, for I believe, about  
25 seven years.

1           Secondly, SMUD right now owns and operates  
2 several natural gas power plants here in the region. Their  
3 local sources of energy that SMUD refers to are largely  
4 fossil fuel, many of them. And there are no plans  
5 according to their annual report and long-term planning to  
6 shutter those natural gas power plants even beyond the 2040  
7 timeline, which they are presenting to the public to be  
8 achieving a 100 percent clean energy future for Sacramento.

9           I think you need to look closely under the hood  
10 at where SMUD is headed and watch the intention is behind  
11 this initiative. We as the solar industry have just come  
12 off of a six-month battle with SMUD over net metering and  
13 the future of rooftop solar. And the economics of rooftop  
14 solar in which SMUD staff have indicated that they see  
15 distributed generation behind-the-meter resources as  
16 direct conflict to SMUD's future.

17           There's a really big problem here and we think  
18 this proposal needs to be shut down. And that SMUD needs  
19 to go back to the drawing board. We think the Commission  
20 needs to greatly restrict the usability of this option in  
21 compliance with the Title 24 mandate.

22           I printed out, on the way here, SB 1. It was 13  
23 years ago, reeling from the last electricity crisis that  
24 California's Legislature in a bipartisan fashion, passed  
25 the Million Solar Roofs Initiative. That initiative has

1 three main principles behind it. One, it had an exclusive  
2 focus on consumer-controlled behind-the-meter solar energy  
3 resources, exclusively. It put in motion, and directed  
4 this very body in 2006 to put in motion the very  
5 regulations you adopted last spring to build new  
6 construction with solar as the most logical, common sense  
7 direction for California to go.

8           It's how you make it more affordable. It's how  
9 you make it accessible to the consumer. Just like your  
10 good work on Energy Efficiency Standards, if left to the  
11 marketplace you guys know a marketplace will not always  
12 respond in what's the best interest of the consumer or the  
13 public or the environment.

14           The whole idea of a mandate is to make something  
15 standard. Community solar should not be considered a  
16 standard feature of new construction in place of behind-  
17 the-meter stresses owned or controlled by the consumer.

18           The third is a principal of SB 1, is the fact  
19 that we cannot trust our utilities to put in place the  
20 programs necessary to give consumers access to onsite  
21 renewable energy. That is implied by the fact that there  
22 is a whole section on municipal utilities needing to be  
23 mandated to comply with SB 1. If we could rely on our  
24 public utilities to do what's best by their own consumers  
25 we would not need the Legislature to mandate them to do



1 these things.

2 I want to --

3 CHAIR HOCHSCHILD: If you could wrap up?

4 MS. DEL CHIARO: Sure. I want to point out just  
5 one fact for you, we have about 1 million rooftop solar  
6 systems in California out of about 17 million buildings.  
7 That's about 6 percent of California's buildings have some  
8 form of self-generation supply parrot that is a far cry  
9 from the goals that we have put in place for ourselves here  
10 in California even going back to 2006. We have a long way  
11 to go.

12 And we felt that this proposal will undermine the  
13 mandate by virtue of the fact that PG&E has to put in  
14 support for it. The fact that the builders would like to  
15 see this passed. We think that this will actually revert  
16 us back to the previous market and harm the goals of this  
17 initiative.

18 CHAIR HOCHSCHILD: Thank you.

19 Let's move on to Ed Smeloff from Vote Solar to be  
20 followed by Steve Campbell. If we could ask all the  
21 speakers to please, we do have a number of speakers, to  
22 stay within time.

23 Thanks, Ed, go ahead.

24 MR. SMELOFF: Good afternoon, Mr. Chairman and  
25 Commissioners. I'm Ed Smeloff. I'm here speaking on

1 behalf of Vote Solar. I'm speaking against the issue  
2 that's before you, the SMUD SolarShares Program.

3 But first, I wanted to start by commending SMUD.  
4 I think SMUD is doing a very good job of going out and  
5 procuring utility-scale solar. And we're seeing this  
6 happen across the country where utility-scale solar now is  
7 lower cost than the existing sources of generation. And it  
8 enables utilities, we are seeing it throughout the Western  
9 United States, to retire to older coal and natural gas  
10 plants. And that's a positive.

11 SMUD should be out there procuring even more  
12 earlier, because it's enabling it to lower the cost of  
13 electricity for its ratepayers. We know this, because  
14 they're able to use their utility-scale solar to lower the  
15 cost to new homeowners. But SMUD should be out there  
16 procuring enough to lower the costs for all of its electric  
17 consumers, not just new homeowners. Why can SMUD do this?  
18 Why can they shift the cost and only provide the benefits  
19 of lower costs to new homeowners?

20 They can do it for two reasons. One, they set  
21 rate for Sacramento, so they're the ratemaking authority.  
22 And two, they have complete monopoly control of the  
23 distribution system. So the combination of those factors  
24 allow it to offer a small discount to new homeowners and  
25 not to offer it any discount from this lower-cost utility-

1 scale for the rest of its ratepayers. So SMUD is  
2 exercising its monopoly power as the distribution utility  
3 to favor its program that is before you.

4           So if you're a home builder in Sacramento, do you  
5 really have a choice? Do you really have flexibility? Can  
6 you go out there and get any other community solar? No,  
7 you can't, because SMUD will not allow you to wheel across  
8 its distribution system. SMUD does not have a program  
9 where it credits a community solar developer and allows  
10 them to offer that to new home builders. SMUD does not  
11 allow master metering, so that a site can be built on the  
12 same premises where new residential buildings are being  
13 built and allow that to be sub-metered to its customers.  
14 So there is no other option, SMUD is using its monopoly  
15 control of the electric distribution system to squeeze out  
16 and prevent other solar community options from being  
17 utilized in Sacramento.

18           So I wanted to leave one last thought, and that  
19 is I know you all understand very well that climate change  
20 is a phenomenon and it's backed up by science. Still, I  
21 think in California there is still a lot of denial about  
22 the impact, the immediate impacts right now that we're  
23 seeing from climate change. We're seeing the driest falls  
24 in recent history, the last three years we've had dry  
25 Octobers and Novembers.

1           My point is you heard from Laurie ten Hope that  
2 we need to pay attention to resilience. There's a lot of  
3 unexpected things that can happen in the future. We need  
4 to pre-position asset solar and storage, so that they can  
5 be used to protect communities and be involved in  
6 microgrids as we develop the control systems.

7           This program does nothing, nothing whatsoever to  
8 improve community resilience.

9           CHAIR HOCHSCHILD: Thank you.

10          MR. SMELOFF: I ask you that you tell SMUD to go  
11 back and work with the solar industry, homebuilders, and we  
12 can come up with something better.

13          CHAIR HOCHSCHILD: Thank you.

14          Let's move on to Steve Campbell and Matt Brost.  
15 And we do have a lot of public comment, so I would just ask  
16 everyone to please keep to the three minutes. Thank you.

17          Go ahead.

18          MR. CAMPBELL: Hello, my name is Steve Campbell,  
19 a Policy and Business Development Policy Manager at Grid  
20 Alternatives, a mission-based nonprofit dedicated to  
21 bringing the benefits of the fast-moving clean energy  
22 economy to low-income and disadvantaged communities across  
23 California including customers of SMUD.

24          Thank you, Commissioners, for listening to Grid's  
25 perspective on this important topic. Grid is concerned

1 with the level of bill reduction SolarShares subscribers  
2 would see under the SolarShares Program. SMUD explain in  
3 the proposal that, "Participants are not guaranteed to see  
4 net benefit, in each month that they participate, but are  
5 guaranteed to see net benefit of at least 5 kW in each year  
6 they participate."

7 Grid worries that some SolarShares subscribers  
8 may actually experience a higher monthly energy bill, which  
9 erodes financial security and results in unpredictable and  
10 unstable energy costs. Furthermore, annual energy bill  
11 reductions based on \$5 per kW per year or roughly \$15 to  
12 \$20 per year for a SolarShares subscriber, is significantly  
13 below what onsite solar customers, a grid customer or not,  
14 typically receives from onsite solar resources.

15 Grid's customers experience meaningful monthly  
16 and annual energy bill reduction or Bill savings. For  
17 instance, as part of the Solar on Affordable Solar Homes,  
18 or SASH Program, each customer is guaranteed to, "Receive  
19 at least 50 percent of the savings as compared to the  
20 standard utility rates from the solar generating equipment.

21 Grid's customers frequently report annual energy  
22 burden reduction in the 70 to 90 percent range. This level  
23 of energy bill savings provides predictable and stable  
24 long-term energy costs directly helping to improve  
25 available customers' economic resiliency. To adjust the

1 variable savings provided by SolarShares, Grid recommends  
2 creating a low-income customer carve-out and increased  
3 savings guarantee.

4 Grid notes that the SolarShares Program does not  
5 provide a differentiated benefit low-income customers and  
6 non-low-income customers. And as discussed would be  
7 providing savings far below what onsite solar can provide.  
8 To address this, Grid recommends that tenants of new  
9 affordable housing units be provided monthly energy bill  
10 savings equivalent to what onsite solar would provide.

11 At this time Grid recommends the SolarShares not  
12 be approved until low-income customers can be guaranteed to  
13 receive meaningful and stable long-term savings. Thank you.

14 CHAIR HOCHSCHILD: Great. Thank you.

15 Let's move on to Matt Brost from SunPower,  
16 followed by Harold Thomas.

17 MR. BROST: Chair Hochschild, Commissioners, staff,  
18 my name is Matt Brost. I'm the Senior Director of Sales at  
19 SunPower Corporation's New Homes Division.

20 In 2005, we opened a division to service  
21 homebuilders and in that time we've now, over the course  
22 until today, installed close to 50,000 homes with these  
23 home builders. A bit stretch of that period was the New  
24 Solar Home Partnership, where the state invested nearly  
25 \$400 million in helping builders bridge the gap between the

1 code then, and the future code that we were all aiming  
2 towards which was zero net energy homes in California.

3 We invested tens of millions of dollars as a  
4 company and I'm sure other companies, like ours, also  
5 invested tens of millions in people, training, workforce,  
6 products, services, solutions, you name it the investments  
7 have been huge.

8 Unfortunately, and then I would say these  
9 investments have also driven the price down. So, we  
10 started at \$8 a watt, we were down to \$3 a watt, roughly,  
11 and so we have made excellent progress in that direction.

12 However, the option that we're being presented here  
13 with today, with the utility community solar seems to me  
14 that all of those investments in some ways are for naught.  
15 We could have done this probably ten years ago, if we were  
16 looking to do that, but that's not the direction that we  
17 had been going.

18 I've participated in California Energy Commission  
19 meetings for the last 15 years and during that time  
20 community solar was really never mentioned only until the  
21 2019 standards, where it was very loosely defined as we  
22 were putting together the standards. And in examples that  
23 staff used was most commonly where builders might like to  
24 use adjacent parcels, or undevelopable land that they may  
25 want to do a program like this with. It was not really

1 iterated in the way that we're talking about today.

2 I also feel that, and having worked with builders,  
3 we talk about that this is a choice. Unfortunately,  
4 builders are making the choice on behalf of homebuyers who  
5 don't have that choice later. And when they're making this  
6 choice, they're foregoing the ability to participate in  
7 solar, take advantage of tax credits, take advantage of  
8 much more significant bill reductions, resiliency through  
9 adding storage to their systems, and coupling those  
10 together.

11 So, you know, not only for the industry, but also  
12 for the customer I think we really have to reconsider what  
13 community solar means.

14 And I will just conclude on -- I'm obviously  
15 looking for a no vote here but, at a minimum, taking a  
16 minute to not vote on this and defining what community  
17 solar really means, I feel that this is extremely precedent  
18 setting in the decisions that you'll make today, and not  
19 just here, but with respect to other things happening in  
20 California. And I believe we should first sort that out  
21 and then move forward with what community solar projects  
22 would meet this really important code.

23 CHAIR HOCHSCHILD: Thank you. Let's move on to  
24 Harold Thomas, to be followed by Don Osborn.

25 MR. THOMAS: Thank you. I'm a retired attorney. I

95



1 live on Portola Way in Sacramento. I'm a ratepayer and a  
2 solar owner.

3 Perhaps my problem is with your guidance, the IEPR  
4 guidance, to particular items. One that there is no  
5 location restriction. So, really, what we're doing  
6 -- I would ask, why should I, as a ratepayer, be financing  
7 commercial solar in Nevada, or Wyoming, and perhaps  
8 Bakersfield, and perhaps destroying Kit Fox habitat, or  
9 destroying Desert Tortoise in the desert. Or destroying,  
10 or certainly -- really, not knowing where the quality and  
11 quantity of that commercial solar is, and it's coming out  
12 of my pocket, and my neighbors. And this is inappropriate.  
13 The no-location restriction is too open-ended. That needs  
14 to be changed.

15 Secondly, the correct size for offsetting energy  
16 use by residents. I went to a meeting put on by SMUD,  
17 Monday night, and to really understand -- this is  
18 complicated stuff to understand what is this proposal  
19 about. I learned that 65 percent of the energy that will  
20 be produced by the new home will be covered by this  
21 program. Not 100 percent.

22 So, if we're going to meet these standards, we're  
23 now restricting each, on an average basis 65 percent of  
24 each home will be covered in this new program. Why is this  
25 not 90 percent or 100 percent? Why have you accepted 65

1 percent?

2 SMUD's point was, well, that's the minimum. Title  
3 22 allows me to do this as a minimum. And my response was  
4 why are we -- how are we going to meet these climate goals  
5 if you're just going at 65 percent?

6 So, I think we need to go back to the drawing board  
7 for a redo. Thank you.

8 CHAIR HOCHSCHILD: Thank you. Let's hear from Don  
9 Osbourne, from Spectrum Energy, followed by Lee Miller.

10 MR. OSBOURNE: Hi. I'm Don Osbourne, President of  
11 Spectrum Energy. I ask you not to give approval to SMUD's  
12 proposal today.

13 I am a SMUD customer and I ran the SMUD solar  
14 programs in SMUD's heydays of the '90s and early 2000s,  
15 when SMUD was the undisputed leader in the  
16 commercialization of PV, especially distributed, so-called  
17 rooftop PV.

18 So, I treasure the groundbreaking work we did at  
19 SMUD back then. I applaud SMUD's continued development of  
20 utility scale PV. But I'm concerned over SMUD's dismissal  
21 of distributed PV. Both are desperately needed.

22 I am concerned that our own SMUD may undo much of  
23 the good work of the Commission by crippling the solar  
24 mandate before it even gets started. SMUD's proposed  
25 program should fail to earn your support for many reasons.

97

1 SMUD's arguments in favor of SolarShares are all  
2 technicalities.

3 Last year, California told the world it was  
4 requiring rooftop solar on new homes. This is how the  
5 world understands it, for good reason. It would be an  
6 embarrassment to the state and a setback for clean energy  
7 if you let this through on technicalities.

8 For multi-family housing, rather than being an  
9 option to help renters access solar, it becomes, di facto,  
10 the only path to the SMUD's lack of virtual net metering  
11 that all the IOUs have to have. In practice, it will do  
12 almost nothing to help renters cut through electricity  
13 bills. Under SMUD's rules, even alternative community  
14 solar projects would be ruled out.

15 SolarShares provides no significant savings to  
16 either developer or tenants. This does not pass the laugh  
17 test. This is clearly not the goal of the solar mandate.

18 Onsite, customer-owned solar can significantly  
19 provide greater savings, while also providing a range of  
20 distributed benefits. These savings, both for solar  
21 customers and all customers at large can be further  
22 enhanced by solar plus storage. However, due to SMUD's  
23 onsite solar sizing limitations, customers locked into  
24 SolarShares commitments would effectively be prevented from  
25 onsite solar-plus-storage systems for 20 years.

1           Most importantly, approval by the CEC for SMUD's  
2 SolarShares program, as it's proposed, would gut the new  
3 mandate and that would quickly spread to other POU's, who  
4 are watching closely. It may even spread to IOUs. No  
5 coincidence that PG&E just sent in a letter of support for  
6 SolarShares.

7           SMUD should not be allowed to undermine the solar  
8 on new homes mandate before it even gets started. I  
9 strongly urge you to use your discretion to either reject  
10 SMUD's ill-conceived SolarShares program or at least send  
11 it back to SMUD for further rework, and encourage them to  
12 work with the community to craft a better plan in line with  
13 the goals of the CEC Solar Mandate, including urging the  
14 adoption of VNEM for multi-family housing so there is  
15 customer choice. Thank you.

16           CHAIR HOCHSCHILD: Thank you. Let's move on to Lee  
17 Miller, followed by Rick Codina.

18           MS. MILLER: My name is Lee Miller. I'm a rooftop  
19 solar customer and I live in South Sacramento. My request  
20 to the Commission is to reject SMUD's SolarShares proposal.

21           The problems that I personally have with the SMUD  
22 proposal is it limits choices. The new home buyer finds  
23 their perfect home, in a school district and a neighborhood  
24 that they want to live in. It's their Barbie dream house.  
25 The builder is in the SolarShares program, the customer

1 wants to buy their own panels. They can't and they have to  
2 find another house.

3 Customer choice, I don't think so.

4 SMUD says that they are supplying those homes with  
5 energy from SMUD's solar farms. The farms would be built -  
6 - these farms would be built anyways. SMUD states, at the  
7 meeting, 350 SAC last Monday, that they would not be able  
8 to supply all the energy to their SolarShares customers  
9 with those farms. SolarShares doesn't even come close to  
10 the rooftop solar benefits of the customer. SolarShares is  
11 \$15 to \$20 a year.

12 My husband and I are both retired, on fixed  
13 incomes. We purchased our house almost two years ago.  
14 With the solar system prices coming down, we were finally  
15 able to afford rooftop solar and folded the investment into  
16 our mortgage. Our household savings is approximately  
17 \$1,800 a year. On our SMUD bill, in our Elk Grove home,  
18 our SMUD bill averaged about \$200 a month. Our bill with  
19 our new home currently runs us about \$55 a month.

20 SMUD's latest plan is just as bad as the proposal  
21 last spring to crush users with a new monthly fee, which  
22 was scrapped after public outcry.

23 The SolarShares proposal is nothing more than a  
24 leasing program by a monopoly. SMUD reaps all the benefits  
25 and customers get little in return. To call this a

1 Community SolarShares program is deceptive and a scam.

2 The California Energy Commission has the power to  
3 deny SMUD's proposal, but will you? It makes sense that  
4 you do since you are the officials who created the Solar  
5 Homes Program to begin with, and it's your job to approve  
6 programs to support the spirit of the solar mandate. Thank  
7 you.

8 CHAIR HOCHSCHILD: Thank you. Let's move on to  
9 Rick Codina, followed by Christopher Worley.

10 MR. CODINA: Thank you, Commissioners. My name is  
11 Rick Codina and I volunteer with 350 Sacramento, working in  
12 particular with electricity issues as they affect climate  
13 change.

14 I retired with more than 34 years in the utility  
15 and energy industry, starting at Lawrence Berkeley Lab in  
16 the '70s. Most of my utility experience is with SMUD,  
17 where I focused on resource planning and rate design.

18 First, let me say that the proposed Neighborhood  
19 SolarShares is an elegant solution, but only to a very  
20 narrow problem where the building site cannot host enough  
21 solar production to meet Title 24 requirements. My fear is  
22 that this option, if approved in its present form, would be  
23 an encouragement for builders to avoid onsite generation,  
24 even where rooftops or other suitable sites are available.

25 And why not? Neighborhood SolarShares allows the

1 builder to avoid the upfront cost requirement for the PV  
2 installations, while transferring the burden of payment to  
3 the occupants over the next 20 years. Yes, the program,  
4 utilizing VNEM at SMUD's chosen PV farm, will match Title  
5 24's allocated load allocation and the customer will  
6 receive the RECs, which assures them of their solar  
7 participation.

8           But I see several issues with this approach, in  
9 instances where PV otherwise can be installed on the site.  
10 First, the customer may see very little remuneration. The  
11 illustrative bill example, for example, shows a hefty  
12 charge. They may only get \$20 for a 4 kW system,  
13 equivalent to less than a Starbuck's coffee every month.

14           Secondly, the arrangement, this is the opportunity  
15 for true distributed benefits, lowering loads on the  
16 transformers and saving on line losses from remote  
17 generation sources.

18           Thirdly, the program would not encourage using  
19 onsite PV production for a storage facility, which could be  
20 used to help offset electrification at multi-family  
21 developments, or demand shift including electric, or  
22 electric car charging, thermal storage for heat pump water  
23 heaters, or centralized heat pump boiler systems.

24           My final point addresses the long-term contribution  
25 of distributed PV production. In our testimony to SMUD, on

1 their IRP, we have heard repeatedly the utility cannot go  
2 beyond their regulatory baseline because they're going to  
3 run out of land to place PV inside the territory. Yet,  
4 they're turning their back on available space on customer  
5 property, which can make a substantive contribution to  
6 SMUD's SP 100 goals, without displacing the land it has  
7 designated on its solar farms.

8           So, finally, I would say that SMUD's Neighborhood  
9 SolarShares proposal, which would utilize VNEM, should be  
10 set up as another alternative so that builders can use that  
11 VNEM for PV installations at their building sites. Thank  
12 you.

13           CHAIR HOCHSCHILD: Thank you. Let's move on to  
14 Christopher Worley, to be followed by MC Rich.

15           MR. WORLEY: Good afternoon. My name is  
16 Christopher Worley. I'm Vivant Solar's Director of Rate  
17 Design. Vivant Solar is one of the nation's largest  
18 residential rooftop installers, operating in 23 states and  
19 the District of Columbia. We have installed and served  
20 thousands of customers in California since 2012.

21           Vivant Solar has new home construction commitments  
22 in SMUD's service territory. Homeowners can choose to role  
23 the cost of a system into their mortgage, but we expect  
24 many will choose the power purchase agreements. The PPA we  
25 will offer will provide an estimated levelized value of \$57



1 per watt per year, assuming a 2 percent escalation of  
2 utility rates. Investing in onsite solar makes owning a  
3 home more affordable by lowering the total cost of  
4 homeownership.

5 The proposed SolarShares program does not provide  
6 equivalent benefits to customers, to the grid, or to the  
7 environments. The estimates \$5 per watt per year customer  
8 benefit is over ten times smaller than what a homeowner  
9 could receive by installing rooftop solar.

10 Installing thousands of rooftop solar systems  
11 avoids and defers transmission investments and thousands of  
12 smart inverters provides local voltage and frequency  
13 supports. And thousands of behind-the-meter energy storage  
14 systems shift load and reduce peak demand. And these  
15 investments make California's grid more resilient.

16 In contrast, SolarShares relies on utility scale  
17 solar with a single point of failure transmission line.  
18 And serving the same customers would mean SMUD is over  
19 investing in generation and transmission to offset line  
20 loss.

21 SolarShares looks like a utility monopoly trying to  
22 offer an inferior service to undermine a competitive  
23 market.

24 Many of Vivant Solar's competitors are here in the  
25 room. If Vivant Solar doesn't provide great savings at a

1 reasonable cost, we lose business to Sunrun, to Tesla, to  
2 SunPower and others. Our customers benefit because  
3 companies like ours figure out ways to drive down costs and  
4 increase customer satisfaction. SolarShares prevents the  
5 installation of solar and storage by eroding the value of  
6 installing onsite solar and storage, and locks homes into  
7 the program for 20 years. And that's going to harm  
8 homebuyers 10 or 15 years down the road.

9           If the SolarShares program is approved, then solar  
10 sellers, like Vivant Solar, will compete with a public  
11 agency that uses ratepayer funds to offer an inferior  
12 service, which undermines a competitive market and  
13 undermines the New Home Standard.

14           Vivant Solar urges you all to vote against this  
15 SolarShares program. Thank you.

16           CHAIR HOCHSCHILD: Thank you. Let's move on to MC  
17 Rich, followed by Mark Abrams, from Solar Edge.

18           MR. RICH: Thank you. Last I checked, I was Al C.  
19 Rich.

20           Anyway, I'm the president and founder of ACR Solar.  
21 We're a manufacturer out in Carmichael. I have 40 years of  
22 solar experience. And I just wanted to say that from a  
23 standpoint of equivalency economics for a homeowner, SMUD's  
24 SolarShares program is a lot more expensive than rooftop  
25 solar. And the homeowner, for all practical purposes,

1 forfeits the option to have storage backup added in the  
2 future, which would dramatically increase both the value to  
3 the customer and to the grid at large.

4           The spirit of the hard fought for Solar Mandate is  
5 defeated and society loses yet another vital energy  
6 resiliency opportunity to have pollution reducing PV panels  
7 and power producing storage on thousands of new residential  
8 homes.

9           This power and storage costs SMUD, the builder, and  
10 the homeowner nothing. For an average 4.2 kilowatt builder  
11 solar system, I understand SMUD's SolarShares program is  
12 guaranteed to save the homeowner \$20 per year, which  
13 equates to \$400 over 20 years. With no government rebates  
14 or energy efficient mortgage benefits, volume builders can  
15 install 20-year performance guaranteed PV systems at low  
16 cost.

17           For example, for a 4.2 kilowatt builder installed  
18 system would cost probably around \$8,000. Wrapped into a  
19 30-year mortgage, the average cost of 4.2 kilowatt system  
20 is about \$528 and produces a \$739 yearly solar savings.  
21 So, minus the \$528 dollar yearly mortgage cost, the  
22 homeowner is \$211 ahead year one.

23           This savings grows as SMUD's per kilowatt hour  
24 increases over time. In 20 years, at a 4 percent annual  
25 increase in SMUD's kilowatt hour rates, the average would

1 grow to over \$550 per year for the average annual savings  
2 of about \$385. Times 20 years is \$7,700.

3 Compare this to SMUD's \$400. No equivalency.

4 Thus, under the most conservative of rooftop solar  
5 estimates, rooftop solar costs the builder and the  
6 homeowner nothing, and will save over \$7,700 in 20 years,  
7 as opposed to the SolarShares' \$400.

8 Conclusion. It is clear that there is no  
9 equivalency as rooftop solar costs far less than SMUD's  
10 SolarShares program by providing a much greater, every  
11 growing income to the homeowner, as well as other, very  
12 important homeowner and societal benefits.

13 SolarShares and community solar should only be used  
14 in the case where shading or others issues prevent the use  
15 of high value solar, rooftop solar.

16 Thank you for the opportunity to speak. And please  
17 reject the SMUD's SolarShares proposal as it stands. Thank  
18 you.

19 CHAIR HOCHSCHILD: Thank you. Let's move on to  
20 Stacy Kalstrom. Sorry, Mark Abrams, first, and then Stacy  
21 Kalstrom, if I'm pronouncing that right. Yeah.

22 MR. ABRAMS: Thank you very much. My name is Mark  
23 Abrams and I'm with a company called Solar Edge, and we are  
24 the world's largest manufacturer of smart inverters for  
25 residential. And I'm here to talk about one of the biggest

1 benefits that only distributed solar systems can bring  
2 which is, in fact, the ability to improve the grid right  
3 where the issues are.

4           So, one of the challenges with this proposal is  
5 utility plants are great, they're very valuable. Community  
6 solar is great, it has a big role. But in the world of  
7 grid services, this is hyper local. This can be the  
8 ability to provide power in blackouts. This can be the  
9 ability to do simple things, like voltage and frequency  
10 regulation. You simply can't do this with a plant located  
11 tens or even hundreds of miles away.

12           So, I think what we're missing here is a huge  
13 opportunity to help improve and stabilize the grid, if we  
14 don't actually allow these systems to be built in the  
15 communities where they're needed. And this program  
16 obviously shifts that production elsewhere.

17           The benefits don't end with local voltage and  
18 frequency and avoids the further construction of peaker  
19 plants, or allows reduced use of them through being able to  
20 do more localized control when there are grid issues.

21           It also brings, as was mentioned earlier, reduced  
22 dependence on transmission and distribution. Less  
23 investment is required because, in fact, that built is  
24 being done there in the community.

25           I think community solar is great. I think when we

1 think about the word community, we think about down the  
2 street, the center of our town. And I think the  
3 definition, as mentioned by some of my colleagues here,  
4 should be reexamined as to what does community solar mean.  
5 In the world of solar, we always thought about this as a  
6 plant nearby, and then you can get these grid services  
7 benefits.

8 But if the community solar plant is across state  
9 lines, if it's 400 or 500 miles down in Southern  
10 California, or 300 miles away, it's not going to bring the  
11 same benefit.

12 So, I'd just like to articulate, from a technology  
13 standpoint, one last point which is grid services are  
14 available today. This is technology we have working here  
15 in the United States and all around the world. This is not  
16 super, you know, complicated things to do. It's improving.  
17 It's getting better all the time. When you put batteries  
18 on top of it, it's amazing the kinds of things that can be  
19 done in terms of providing local resiliency.

20 So, I think, when we think about community, we  
21 really want to think about does this really benefit the  
22 community specifically and locally, as opposed to the  
23 centralized, further away plant. And try to maybe -- I  
24 think the idea of redefining community and how it was meant  
25 to work within the mandate would probably benefit everybody

1 in this room, because there are probably places where it  
2 would be a great fit instead of rooftop on every single  
3 home. But it should be well-defined, clear and provide the  
4 same benefits, and not just the language that we heard from  
5 the SMUD folks earlier today.

6           Anyway, thank you very much.

7           CHAIR HOCHSCHILD: Thank you. Let's move on to  
8 Stacy Kalstrom, to be followed by Ed Murray from Aztec  
9 Solar.

10           MS. GALLARDO: Stacy Kalstrom had to leave and  
11 asked me, Noemi Gallardo, the Public Advisor, to read her  
12 comments.

13           Please reject SMUD's SolarShares proposal. I'm  
14 shocked about SMUD's SolarShares proposal. In 1998 or '99  
15 we got our first solar panels in a program sponsored by  
16 SMUD. They were all about everyone getting panels. We  
17 live close to the SMUD facility and they brought numerous  
18 foreign dignitaries to our house so they could watch our  
19 meter spin backwards.

20           Now, what seems to be backwards is this SolarShares  
21 program. It takes away consumer choice and also would gut  
22 the California Housing Mandate that would put solar on all  
23 new homes. California needs to lead the way and we were  
24 doing that but, now, SMUD wants to change all of that.

25           We recently replaced our 20-year-old system.

1 SolarShares will disincentivize people from going solar.  
2 That is just wrong.

3 CHAIR HOCHSCHILD: Thanks. Let's move on to Ed  
4 Murray, to be followed by Steve Berlin.

5 MR. MURRAY: Thank you. Hello, Commissioner  
6 Hochschild and the rest of the Commissioners. Thanks for  
7 having us here today.

8 My name is Ed Murray. I'm the President of Aztec  
9 Solar in Rancho Cordova. And we are a company that  
10 installs residential and commercial solar systems, not only  
11 electric systems, but swimming pool and hot water systems.

12 I am also the President of the California Solar and  
13 Storage Association, a 500-member company based in  
14 Sacramento, but covering California.

15 I've been in the solar industry since 1978. I  
16 started when I was five years old.

17 (Laughter)

18 MR. MURRAY: I've seen SMUD as a leader in the  
19 greening of not only Sacramento, but the leader for the  
20 utilities and the rest of the country, if not the world.  
21 This is a treacherous path that SMUD is treading. We need  
22 all forms of renewables if we are to save this planet.

23 What SMUD is doing is not a Trojan horse, but a  
24 full assault on the mission we must undertake. If you  
25 believe that SMUD is doing the right thing, then they have



1 accomplished their goals. Appearing to be a green utility  
2 but, really, engaging in underhanded tactics to avoid  
3 distributed generation.

4 This will not only affect the California goals of  
5 100 percent renewables, but will also give utilities a way  
6 out of the wonderful mandate that we all high-fived last  
7 year, in this same room.

8 I have had a lifelong career in renewables and have  
9 always been concerned that the utilities would someday own  
10 the sun. If you allow this to happen, the utilities will  
11 win, not only in Sacramento, but perhaps the rest of the  
12 country. As California goes, so does the rest of the  
13 country.

14 I urge a no vote on this. Thank you.

15 CHAIR HOCHSCHILD: Thank you. Let's move on to  
16 Steve Berlin, to be followed by Ben Davis.

17 MR. BERLIN: Good afternoon. I'm Steve Berlin. I  
18 own a home up in Antelope and I buy power from SMUD.

19 I'm here today because I'm concerned that we, as a  
20 community, and you as our representatives, do the right  
21 thing. A number of years ago I paid for solar to go on my  
22 rooftop because that was the right thing to do, for a lot  
23 of reasons that I don't think I need to go into.

24 I know this is a complicated issue and I probably  
25 don't understand it all. But in my mind, there's a couple

1 of ways to go with solar. We can build giant solar farms,  
2 and get the power, and send them over transmission lines to  
3 the homes.

4 But as your own staff said to you, when you were  
5 talking about Agenda Item 3, the fires and loss of lives  
6 were caused by transmission lines. Is that really the best  
7 way for us, as a community, to go?

8 I'm concerned that a better way, the best way for  
9 us to go is rooftop solar with battery backup. It speaks  
10 to the issues of reliability. And I just urge you to do  
11 what the people of California want, which is rooftop solar,  
12 not giant solar farms. Please, do the right thing.

13 CHAIR HOCHSCHILD: Thank you. Let's move on to Ben  
14 Davis, followed by Joe Cain.

15 MR. DAVIS: Good, probably afternoon now. My name  
16 is Ben Davis. I'm a policy associate with the California  
17 Solar and Storage Association. The same organization as  
18 Bernadette and Ed.

19 When I was preparing my comments, I was listing out  
20 all of the issues with the SolarShares program and I  
21 counted 15. Thank you, Noemi. But I am only going to  
22 touch upon one of them, maybe two, if I have the time.

23 One of the benefits of the mandate is that it makes  
24 homes more affordable. This is a graph here of the average  
25 annual benefits of solar. This graph here are the benefits

1 of onsite solar. I took numbers from the Energy  
2 Commission's website on the net benefits.

3 On the benefit side you have lower electricity  
4 bills. On the cost side, you have the upfront cost of the  
5 system and the higher mortgage payments. But on average,  
6 it's going to be \$335 a year.

7 The benefits of the SolarShares program is \$5 per  
8 kilowatt per year, which equates out -- I was a little  
9 generous, I assumed a bigger system than average, but it  
10 equates out to \$15 or \$20 per year.

11 The problem with that is that, number one, it makes  
12 homes less affordable. But number two, it is in direct  
13 violation of the criteria set by the Commission.

14 Criteria number 3, for a proposal to be approved,  
15 for a community solar program to be approved to meet the  
16 New Home Solar Mandate, are energy savings benefits. And  
17 both the criteria and the compliance manual state that the  
18 benefits of onsite solar -- sorry, of community solar, need  
19 to be equivalent to the benefits of onsite solar.

20 I'll read you one excerpt: Administrators of a  
21 proposed community shared solar system must ensure that the  
22 system provides equivalent benefits to the residential  
23 building expected to occur if the solar had been installed  
24 on the building site.

25 So, that is from the compliance manual and there's

1 similar language actually in the standards, in the  
2 criteria, Criteria Number 3 itself.

3 SMUD staff have -- sorry, the Energy Commission  
4 staff have interpreted this criteria to mean you need at  
5 least some benefits. The benefits need to be greater than  
6 zero. But I think we should read the criteria as it reads,  
7 which is equivalent benefits.

8 And the last point that I'll try to make real quick  
9 is that if the SolarShares program is approved, it will be  
10 the end of the New Home Solar Mandate. Today, 28 percent  
11 of new homes receive solar and builders today have the  
12 option of installing -- they have the option.

13 If the SolarShares program is approved, once again  
14 they will have that option. And we should expect maybe a  
15 little more because of the power shutoffs. But if the  
16 vision is solar on every new roof, this is not that vision.  
17 This is the opposite.

18 Thank you. And I apologize for going over.

19 CHAIR HOCHSCHILD: Thank you. Let's move on to Joe  
20 Cain, to be followed by Sheridan Pauker.

21 MR. CAIN: Hello, Joe Cain with the Solar Energy  
22 Industries Association.

23 I'm going to dig right in on some of the technical  
24 requirements. And I think of modeling. You know, I'm a  
25 former energy consultant, used to prepare these reports a

1 really long time ago, decades ago.

2 But if we go into that CBECC-Res software or we go  
3 into any other compliance software, what we're going to go  
4 into is the solar part and, then, the option battery  
5 compliance credit. And so, in Joint Appendix JA-12, JA-12  
6 provides the qualification requirements for battery storage  
7 to meet the requirements of battery storage compliance  
8 credit available in the performance standards in  
9 combination with an onsite photovoltaic system.

10 So, the first point is if builders choose to -- if  
11 you approve SolarShares, which we wish you won't, builders  
12 -- and builders choose that option, they no longer have any  
13 option for compliance credit under the standards in the  
14 performance approach. Therefore, they're giving up cost  
15 optimization of the overall building itself.

16 Second, I want to point to the next sentence in JA-  
17 12: The primary function of the battery storage system is  
18 daily cycling for the purpose of load shifting, maximized  
19 solar self-utilization, and grid harmonization. That's  
20 also what you're giving up.

21 And so, as you -- if you approve this, and more  
22 builders choose to do that offsite solar, and we support  
23 community solar but not this program, they no longer have  
24 that option to take compliance credit for batteries. Fewer  
25 batteries will be installed. We won't enjoy the economies

1 of scale as rapidly as we wish.

2           And also, from CEC presentations, some of the  
3 materials that we've seen, when staff helped us in our  
4 presentations as speakers, as panelists, we saw slides  
5 about the invisible home. We've got the duck curve we've  
6 heard about a lot. We have a CEC slide that shows when you  
7 combine solar and storage onsite that the battery charges,  
8 when the peak production is more than  
9 -- when the power production is more than you need, it  
10 discharges during peak periods. And to the grid, that home  
11 can appear invisible. That goes away if builders choose --  
12 if you approve this and builders choose that option, that  
13 goes away. And that goes away for consumers.

14           I recently, over the summer, became a SMUD customer  
15 myself. I'm getting an acute awareness of time of use  
16 rates. And one thing I will say is that you're taking away  
17 that energy independence that consumers enjoy. I'm  
18 assuming that if SolarShares is approved and SMUD supplies  
19 the power, they will still be subjected to the same time of  
20 use rates. They will still have the same pain points about  
21 when they can or cannot do things in their own homes.

22           And I think that another big concern, of course, is  
23 that this is precedent setting. And we know that  
24 Association of Municipal Utilities supports, we know that  
25 PG&E supports --

1 CHAIR HOCHSCHILD: If you could wrap up, sir,  
2 thank you.

3 MR. CAIN: Oh, I'm sorry. I started my time real  
4 late. I'll stop there. Thank you very much.

5 CHAIR HOCHSCHILD: Thank you. Just, for folks in  
6 the audience, we have at this rate about another hour and  
7 15 minutes of public comments, if we go at this rate. What  
8 I would ask of people, who are speaking from here forward,  
9 if you have a new point to make, that's really great.  
10 Otherwise, it's just helpful to state your position, your  
11 organization, and that way we can get through and get to  
12 the discussion.

13 Go ahead, Sheridan Pauker.

14 MS. PAUKER: Hi Chair Hochschild and Commissioners.  
15 I'm Sheridan Pauker, a partner at Keyes & Fox, speaking on  
16 behalf of CALSSA. I have three points to make.

17 First, the Commission has clear and unambiguous  
18 authority under your regulations to reject this  
19 application. And we respectfully urge you to exercise your  
20 discretion to do so.

21 Second, this application doesn't satisfy Title 24,  
22 Part 1, Section 1-115(a)(3) because it doesn't provide  
23 equivalent benefits to the subscribers as they would  
24 receive from onsite solar.

25 Third, this application doesn't satisfy Section 10-

1 115 as a whole because it doesn't satisfy the plain meaning  
2 of community.

3 So, in three separate sentences in Section 10-115,  
4 your regulations confirm your discretion. You have  
5 explicit authority under the terms of 10-115(b) to reject  
6 the application if you determine it to be inconsistent with  
7 the requirements of Section 10-115 as a whole.

8 Second, the application is required to demonstrate,  
9 to your satisfaction, that each of the requirements  
10 specified in Section 10-115(a) 1 through 6 will be met.

11 Third, Section 10-115(c) provides that you are only  
12 required to approve the application if it demonstrates to  
13 your satisfaction that these are met.

14 SMUD bears the burden of proof to demonstrate that  
15 the application meets the requirements. And, of course, as  
16 you know, you're free to accept or reject staff level  
17 recommendations.

18 Ultimately, it's the Commission itself that is  
19 responsible for interpreting and applying its own  
20 recommendations, this bold, new mandate in Title 24, and to  
21 set the precedent for how it will be applied going forward  
22 across California.

23 Here, you, the Commissioners, should reject this  
24 application because it does not satisfy all of the  
25 requirements of Section 10-115. As was just explained, for



1 10-115(a) (3) it doesn't provide equivalent benefits.  
2 Thirty-five dollars a month for onsite solar is based on  
3 the CEC's own data, compared to a total of approximately  
4 \$20 a year for what subscribers would receive in energy  
5 savings benefits under SMUD's program.

6 Second, while the Commission didn't define  
7 community solar in its regulations, in the one instance in  
8 which the California Legislature did indicate the meaning  
9 of community renewables, which was in Public Utilities Code  
10 Section 2833(p), it was to facilitate development of  
11 eligible renewable resource projects located close to the  
12 source of demand.

13 CEC's sister agency, the CPUC, interpreted the  
14 meaning of community in that section for purposes of  
15 expressions of interest in enhanced community renewables  
16 projects as customers within the same municipal or county,  
17 or within 10 miles of the customer's address, and affirmed  
18 that this past September as a core feature of the program.

19 CHAIR HOCHSCHILD: With all due respect, I'm going  
20 to just have to cut people off at the time, because  
21 everyone's running over.

22 MS. PAUKER: Absolutely, yeah.

23 CHAIR HOCHSCHILD: So, let's move on to the next  
24 speaker.

25 MS. PAUKER: So, we urge you to reject this

1 application --

2 CHAIR HOCHSCHILD: Thank you.

3 MS. PAUKER: -- because it doesn't satisfy the  
4 plain meaning of community. Thank you.

5 CHAIR HOCHSCHILD: Going forward, can we really ask  
6 people to the greatest degree to be brief.

7 Julia Cantor, from CALSSA, to be followed by  
8 Alexander McDonough from Sunrun. Go ahead.

9 MS. CANTOR: Good afternoon. My name is Julia  
10 Cantor. I'm an attorney with Keyes & Fox and I'm also  
11 speaking on behalf of CALSSA.

12 Commissioners, we urge you to exercise your clear  
13 discretion to determine that the requirements of Section  
14 10-115 are not satisfied by SMUD's application because this  
15 program cannot qualify as community shared solar.

16 Although, neither the Public Resources Code, nor  
17 the language of Title 24 itself define community shared  
18 solar, we can borrow from the principles of construction  
19 employed by the California Supreme Court by examining the  
20 language of the regulation, giving the words their usual  
21 and ordinary meaning, and finding that the plain meaning of  
22 the language should govern here.

23 In the absence of controlling definitions, courts  
24 often look to dictionary definitions to interpret language.  
25 Black's Law Dictionary defines community as a neighborhood,

121

1 vicinity, or locality.

2 Merriam Webster defines it as a unified body of  
3 individuals, such as the people with common interests  
4 living in a particular area.

5 Dictionary.com similarly defines it as a social  
6 group of any size whose members reside in a specific  
7 locality, share government, and often have a common  
8 cultural and historical heritage.

9 The SMUD's SolarShares program cannot satisfy  
10 Section 10-115 because it cannot qualify as a community  
11 solar project. The 65-megawatt, Great Valley Solar  
12 Resource proposed to supply Sacramento customers is located  
13 over 135 miles from the closest boundary of SMUD's service  
14 territory, and does not serve customers in a particular  
15 neighborhood, vicinity, or locality. It does not solely  
16 provide energy savings and economic benefits to the SMUD  
17 customers living within SMUD territory, or those who reside  
18 in a particular area or share local government.

19 To interpret the plain meaning of community shared  
20 solar or battery storage system, under Title 24, the  
21 Commission should also look to the expertise of nonprofits  
22 and advocacy organizations actively working every day to  
23 ensure community solar programs provide true benefits to  
24 communities and consumers, such as Vote Solar and the  
25 Coalition for Community Solar Access.

1           Among such experts, there's a general  
2 understanding that the concept of community solar is  
3 defined as local solar facilities, the benefits of which  
4 are shared and include generate of local jobs, other local  
5 economic benefits, and environmental and public health  
6 benefits to the local community of subscribers.

7           The SMUD proposal cannot satisfy Section 10-115  
8 because the utilization of a 60-megawatt project located  
9 over 160 miles from where we sit today, in a totally  
10 separate part of the state cannot satisfy the plain meaning  
11 of community solar. This resource is not local and it will  
12 not provide local jobs, local economic benefits, or  
13 environmental benefits to the customers who will  
14 participate.

15           This application doesn't meet the requirements of  
16 Section 10 --

17           CHAIR HOCHSCHILD: Thank you. We're going to have  
18 to move on.

19           MS. CANTOR: Thank you for the opportunity.

20           CHAIR HOCHSCHILD: Yeah, thank you. Let's move on  
21 to Alexander McDonough, from Sunrun, followed by Susannah  
22 Churchill from Vote Solar.

23           Again, if you have a new point to make, that's  
24 great. But if you can brief, if possible, that would be  
25 great as well.

1 MR. MCDONOUGH: Thank you, Commissioners. I'm  
2 Alex McDonough, Vice President of Public Policy at Sunrun.  
3 Sunrun has innovated and grown to over 250,000 customers  
4 thanks to California's forward looking policies. Today,  
5 one in four Californians, who we serve, choose to add a  
6 battery to their solar systems. That number is going to go  
7 up.

8 SMUD's proposal to comply with Title 24 by using  
9 far away, large-scale projects that already exist,  
10 completely undermines CEC's new standards. It's like  
11 allowing builders to satisfy disability access laws by  
12 making a charitable contribution to an organization that  
13 installs accessible equipment on buildings in another  
14 county or state. It's a good thing to do. We would not  
15 argue with that. But it doesn't deliver the protections  
16 the law requires.

17 CEC, similarly, had direct consumer benefits in  
18 mind when it adopted new home solar requirements.  
19 Commissioner McAllister stated, in the CEC's press release  
20 that: The buildings that Californians buy and live in will  
21 operate very efficiently while generating their own clean  
22 energy. They will cost less to operate, have healthy  
23 indoor air, and provide a platform for smart technologies  
24 that will propel the state even further down the road to a  
25 low emissions future.

1           That will not happen if SMUD's proposal is  
2 adopted. There's no argument SMUD can offer that its  
3 proposal provides the same benefits to a home as an onsite  
4 solar and battery system.

5           Worst of all, SMUD's proposal may prevent  
6 homebuyers from adding solar and storage for 20 years. If  
7 a developer chooses SMUD's solution today, it becomes much  
8 more expensive for the homebuyer to add solar paired  
9 storage tomorrow.

10           SMUD has also asserted that the solar requirements  
11 add costs for builders and consumers. And this is false.  
12 Throughout California, solar providers are paying builders  
13 for access to roofs if they opt into third-party leases or  
14 power purchase agreements. And, generally, customers  
15 benefit from greater annual savings with rooftop solar than  
16 through SMUD's SolarShares program.

17           We, and others in the industry, have invested  
18 significant time and resources working with housing  
19 developers across the state to offer new homebuyers cost  
20 effective and valuable solar options this January.

21           Please do not vote to undo this work to make  
22 California communities more resilient. Thank you for your  
23 time.

24           CHAIR HOCHSCHILD: Thank you. Let's move on to  
25 Susannah Churchill from Vote Solar, to be followed by

1 Rachel Bird, from Borrego Solar.

2 MS. CHURCHILL: Thank you, Commissioners. My name  
3 is Susannah Churchill. I'm California Director with Vote  
4 Solar. We're a nonprofit advocacy organization working to  
5 make solar more accessible and affordable in states across  
6 the country.

7 I'm here to urge you to reject SMUD's application.  
8 This is a moment where you can and must use your  
9 discretion, provided by the law, to reject a proposal that  
10 doesn't meet the spirit of community solar under the policy  
11 that you worked so hard to craft.

12 The decision that you make today, of course is  
13 going to be crucial because it will set precedent if you  
14 allow builders in SMUD territory to essentially take a  
15 large-scale solar project that provides only a small  
16 customer savings, and call that community solar for the  
17 purpose of the New Home Solar Mandate, then many other  
18 utilities are going to seek the same treatment. And  
19 builders will seek to use that option because it's cheapest  
20 and easiest for them.

21 Instead of serving Californians with local solar  
22 and storage that will give them real bill savings, as well  
23 as providing avoided costs for all customers, the CEC will  
24 simply drive more large-scale solar development. And  
25 large-scale solar cannot provide the avoided transmission

1 and distribution savings to all customers, nor the grid  
2 services that others have mentioned, like voltage support  
3 and life extension of distribution equipment, which local  
4 solar and storage can.

5 Of course, we need all kinds of solar to combat the  
6 climate crisis. But it's clear that building more large-  
7 scale solar and providing customers with only a tiny bill  
8 savings is not what you had in mind when you created this  
9 policy.

10 And if I can just speak from the heart for a moment  
11 here, you know, because you're California policymakers, you  
12 really have the opportunity to change the world. And, you  
13 know, making change requires both having the vision and  
14 then having the determination to follow through and make  
15 that vision a reality.

16 And you've really taken the first step here.  
17 You've created this vision that is inspiring people all  
18 over the world of a near future California, where people  
19 just have rooftop solar built into their homes. They don't  
20 even have to think about it and, yet, they get to benefit  
21 from the self-sufficiency from the additional grid  
22 resiliency, from all the benefits. Whether you're rich or  
23 poor, you get that built into your home. I think that many  
24 ordinary people think that's exactly what we should be  
25 doing.



1           But in order to make that vision more than just a  
2 mirage here, you are being called to defend it with  
3 determination and to reject this proposal which is  
4 essentially profit driven, and going to prevent that vision  
5 from becoming real.

6           So, I really encourage you to stay true to your  
7 vision here and take the time to do this right. So, thank  
8 you for the opportunity to speak.

9           CHAIR HOCHSCHILD: Thank you. Let's move on to  
10 Rachel Bird, to be followed by Ray Tretheway.

11           MS. BIRD: Hi, I'm Rachel Bird with Borrego Solar.  
12 And I'm here on behalf of the community solar industry.  
13 We, likewise, urge you guys to vote against SMUD's  
14 application.

15           I'm going to read a short letter from our CEC, Mike  
16 Hall.

17           Commissioners, I urge you not to approve SMUD's  
18 application for CEC approval of its SolarShares program as  
19 a compliance option for the 2020 Building Energy Efficiency  
20 Standards.

21           CHAIR HOCHSCHILD: Excuse me. Is this the same  
22 letter that went into the docket?

23           MS. BIRD: It might have, yes.

24           CHAIR HOCHSCHILD: I don't think we need to hear  
25 that, if it's been submitted. Thank you.

1 MS. BIRD: All right, that's fine.

2 CHAIR HOCHSCHILD: But any other comments you have.

3 MS. BIRD: I have my own comments as well. So, on  
4 behalf of the community solar industry, I just wanted to  
5 say we've talked a lot about what rooftop solar can do and  
6 it's such an important prong in California's fight against  
7 climate change. But community solar's an important prong,  
8 too. And SolarShares doesn't represent community solar.

9 We think of community solar as providing real  
10 additionality, new resources to meet every new kilowatt of  
11 residential demand. We think of it as providing a customer  
12 benefit commensurate with that offered by rooftop solar.  
13 We think of it as distribution connected, which was  
14 contemplated in the CEC's FAQ that accompanied the Building  
15 Code. And we think of it as community scale, usually no  
16 more than a few megawatts.

17 Many of the leading programs across the country cap  
18 projects around 1 to 5 megawatts, ensuring that these are  
19 community scale, community-based systems, offering benefits  
20 to ratepayers and to their participants.

21 Thank you for leading the way with this Building  
22 Code. It sets a call for good community solar throughout  
23 our state. But, unfortunately, SMUD's SolarShares  
24 application would undermine that vision and lower the bar  
25 for community solar in California. Thank you.

1 CHAIR HOCHSCHILD: Thank you. Let's move on to  
2 Ray Tretheway, to be followed by Todd Farhat.

3 MS. GALLARDO: Ray Tretheway had to leave and asked  
4 Noemi Gallardo, the Public Advisor, to read his comments:

5 The Sacramento Tree Foundation supports Agenda Item  
6 Number 6. The option for offsite solar panels promotes  
7 the development of shade trees in residential  
8 neighborhoods, while still ensuring the community reaps the  
9 benefits of clean, renewable energy from photovoltaic  
10 systems.

11 Shade trees and solar panels are both proven energy  
12 conservation measures that should be complementary, not  
13 conflicting options.

14 New residential communities rarely have established  
15 tree canopies. For those homes, sunlight is abundant.  
16 Young trees and newly installed solar panels are not  
17 competing for sunshine. Twenty years from now, though,  
18 they might. That places homeowners in a difficult  
19 position.

20 To reap the benefits of rooftop solar, mature trees  
21 could not fully shade the home and would have to be  
22 severely pruned back or, worse, removed. To reap the  
23 benefits of shade, the homeowner would not be able to use  
24 rooftop solar to its full potential. The homeowner, it  
25 seems, would have to choose solar or shade, but not both.

1           It does not have to be that way and we should not  
2 wait 20 years to try to solve this problem. Allowing  
3 developers to position solar offsite encourages homeowners  
4 to plant and cultivate shade trees now, so that one day  
5 those mature trees will help cool their homes and  
6 neighborhoods naturally, and reduce their dependence on  
7 electricity during peak summer hours.

8           The benefits of shade trees, of course, extend  
9 beyond the individual homeowner. When properly sited,  
10 planted, and cared for neighborhood tree canopy promotes  
11 public health, carbon sequestration, and clean air while  
12 combating the adverse effects of projected increase in  
13 hotter days, urban heat islands, and heat waves.

14           CHAIR HOCHSCHILD: All right, thank you. Let's  
15 move on to Todd Farhat, to be followed by Stacy Reineccius.

16           MR. FARHAT: Hi, my name is Todd Farhat. I'm with  
17 the SunStreet Energy Group. Okay, thank you. First, I  
18 would like to thank the Commission for allowing public  
19 participation to address this crucial issue.

20           I would also like to thank the Commission for their  
21 leadership in the New Solar Home Program. And the CPUC for  
22 the Self-Generation Incentive program, both of which have  
23 spurred significant investments for local energy solutions.

24           My comments today and my hope is that the  
25 Commission's collective momentum towards a resilient grid

1 will be preserved by today's vote.

2 SunStreet is a wholly owned subsidiary of Lennar.  
3 Lennar is the state's largest homebuilder. We, at  
4 SunStreet, only offer residential solar to new home  
5 construction. Our program was designed for builders' new  
6 compliance option. It adds no upfront costs to the new  
7 home, which is vital in terms of new home affordability.

8 SunStreet and Lennar both oppose SMUD's overly  
9 broad proposal. We oppose it because we believe it slows  
10 down the innovation necessary to meet California's long-  
11 term climate and energy goals. We also oppose it because  
12 we believe it exploits what was supposed to be an exception  
13 to the mandate, specific circumstance.

14 As the 2019 Energy Code was being crafted, builders  
15 lobbied the Commission for an alternative to the onsite  
16 renewable compliance. In a very specific circumstance, we  
17 lobbied for offsite community solar to meet the energy  
18 needs of multi-family units. And in doing so, we also  
19 lobbied for broad regulations to be written to maximize the  
20 Commission's discretion when approving an application.

21 Today, SunStreet asks the Commission to maximize  
22 its discretion and interpret its own regulation in a way  
23 that will preserve the solar industry's working definition  
24 of community solar. No statute requires the Commission to  
25 provide an offsite compliance option. And no statute

1 defines community solar. It is up to the Commission to  
2 determine their meaning and application.

3 Although California lacks the statutory definition  
4 of community solar, the solar industry's long-standing  
5 definition has a few criterias I would like to share.

6 First, community solar must be physically located  
7 near the community it serves. Second, community solar  
8 should be sized to reflect the energy needs of the  
9 community it serves.

10 And last --

11 CHAIR HOCHSCHILD: Sorry, sir. With respect, we  
12 have a lot of evidence on that, so I'll stop you there.  
13 But, thank you.

14 MR. FARHAT: Thank you.

15 CHAIR HOCHSCHILD: Let's move on to --

16 MR. FARHAT: Thanks for your time.

17 CHAIR HOCHSCHILD: Thank you. Stacy Reineccius, to  
18 be followed by Lauren Cullum.

19 MR. REINECCIUS: Hello, Stacy Reineccius. I'm CEO  
20 and founder of Powertree Services. We develop and  
21 manufacture technology and provide services for multi-  
22 family property owners and developers.

23 I'm going to agree with many, many of the comments  
24 previously made. And I want to address one other  
25 component, which is that in my conversations with several

1 of you, with other Commissioners, with folks at GO-Biz and  
2 throughout the Commission and the Commission staff, one of  
3 the points that's always been driven home is that we don't  
4 have enough capital being brought to bear on this problem  
5 of GHG reduction and fighting climate change.

6 And the New Solar Home Mandate, particularly in the  
7 impact upon multi-family is a great mobilizer of capital.  
8 And by disincenting the investment by property developers,  
9 such as Lennar, which you've just heard, and others, you  
10 are raising a barrier, and enabling a lesser development  
11 and fewer options for addressing all of these problems.  
12 Not just for solar, but also for electric vehicle charging,  
13 for resiliency, and for the safety and health of the  
14 communities in which this is all being done.

15 I urge a no vote on this and a reconsideration of  
16 and clarification of the definition of community solar.

17 CHAIR HOCHSCHILD: Let's move on to Lauren Cullum,  
18 to be followed by Julia Randolph.

19 MS. CULLUM: Good afternoon, Commissioners, thank  
20 you for the opportunity to comment today.

21 I'm Lauren Cullum with Sierra Club California,  
22 representing 13 local chapters in California and half a  
23 million members and supporters in the state.

24 We believe SMUD's proposal is unacceptable and goes  
25 against the intentions of Title 24 regulations and the New

1 Solar Mandate. And, therefore, are requesting that the  
2 Energy Commission reject this proposal.

3 I was happy to hear earlier today about the CEC's  
4 energy resiliency efforts. We need this. We need that.  
5 We need more resilience. We need to be building a more  
6 resilient California. And this means helping homes and  
7 communities become more independent of the grid. To do  
8 this, we need to be encouraging more onsite solar and true  
9 local community solar, not utility scale solar farms  
10 located tens to hundreds of miles outside of the community.  
11 This is especially important considering the wildfires,  
12 power shutoffs, and general instability of California's  
13 grid.

14 SMUD's proposal is inconsistent with the state's  
15 goals to expand local renewable energy and building more  
16 resilient homes and communities. Approving this proposal  
17 will set a bad precedent in California, which will result  
18 in blocking the development of onsite solar and local  
19 community solar at a time when our state needs it.

20 You have the ability to reject this proposal right  
21 now and we urge you to please do so. Thank you.

22 CHAIR HOCHSCHILD: Thank you. Let's move on to  
23 Julia Randolph, to be followed by Gauyal Sahbaa, which the  
24 Public Advisor will read. Thank you.

25 MS. RANDOLPH: Hi, Julia Randolph on behalf of the



1 Coalition for Clean Air. I appreciate the opportunity to  
2 speak and I'll try to make this quick.

3 We are in opposition of SMUD's proposal.  
4 Sacramento City has the fifth worse smog in the country,  
5 according the American Lung Association, so we aren't  
6 meeting state or federal air quality standards. We need  
7 any and all help that we can get. And more solar will  
8 reduce the burning of fossil fuels. And SMUD's proposal  
9 won't add new solar in the Sacramento community.

10 It also defeats the intent of the mandate by not  
11 basing all of the projects in the Sacramento community,  
12 therefore not providing true community solar. Which as I  
13 stated earlier, the Sacramento community desperately needs.

14 We urge the Energy Commission to reject SMUD's  
15 proposal to avoid the solar mandate. Thank you.

16 CHAIR HOCHSCHILD: Thank you. Gauyal Sahbaa, to be  
17 followed by Christina Marshall.

18 MS. AVALOS: Rosemary Avalos for the Public  
19 Advisor's Office, reading for Gauyal Sahbaa.

20 Dear CEC Commissioners, as a family physician and  
21 31-year resident of Sacramento, and a climate activist, I  
22 ask you to reject SMUD's application.

23 Yeah, that's it.

24 CHAIR HOCHSCHILD: Okay, thank you. Christina  
25 Marshall, Community Members, to be followed by Rick Umoff.

1 MS. MARSHALL: Good morning, Commissioners and  
2 board.

3 With the support of the CEC and our State  
4 Legislators, the Title 24 Energy Building Codes were  
5 revised to include rooftop solar in all new construction, a  
6 way to further lower greenhouse gases and make it more  
7 affordable for homeowners to take advantage of all the  
8 benefits of solar, and lower their global footprint. A  
9 win-win.

10 Today, SMUD is asking you to approve the  
11 SolarShares program, which exploits a loophole in the Title  
12 24 Building Code. SolarShares, as written, would enable  
13 property developers to avoid installing rooftop solar on  
14 new construction and tie new homeowners into leasing their  
15 electricity from SMUD for 20 years.

16 While their neighbors, who purchased homes with  
17 solar or installed rooftop solar and a battery storage,  
18 across the street, would enjoy the full monetary and  
19 reliability benefits of rooftop solar and battery storage  
20 for 20 years.

21 Now, in the scope of things, 20 years does not look  
22 like much. But think where we were in the year 2000, pre-  
23 9/11. Think of the strides, technologically, we have made  
24 from call-in internet to access, call-in internet access to  
25 cell phones.

1           Our municipal utility, SMUD, appears to be working  
2 to stop customers, especially new customers from adding  
3 rooftop solar and storage, thereby cutting dependence --  
4 thereby, threatening SMUD's monopoly.

5           We know that we all need to do our part to lower  
6 greenhouse gases. It's apparent, the changes that  
7 additional CO2 in our atmosphere is having worldwide.  
8 Today is the day we change. Today is the day we ask the  
9 California Energy Commission to deny SMUD's SolarShares  
10 program as written.

11           This is a good idea, skewed to benefit developers  
12 and SMUD and avoid the full implementation of Title 24 to  
13 conserve energy.

14           We need you to ensure that rooftop solar and  
15 storage are part of the big picture, developing microgrids  
16 of sustainable power throughout the Sacramento region. For  
17 that reason, it is the obligation of the CEC to send SMUD  
18 back to the drawing board, include a more equitable  
19 SolarShares program for consumers.

20           As a promoter of affordable housing and  
21 establishing a fair, equitable path for all SMUD customers  
22 to take advantage of a path to clean energy, Charles Warren  
23 would have approved.

24           This is a true step towards establishing  
25 resiliency. We do not have 20 years to spare.

1 CHAIR HOCHSCHILD: Thank you, ma'am.

2 Unfortunately, I'm going to have to stop you there.

3 Let's move on to Rick Umoff, to be followed by Dan  
4 Jacobson.

5 MR. UMOFF: Thank you, Commissioners. My name is  
6 Rick Umoff. I'm the California Director at the Solar  
7 Energy Industries Association. We are the national  
8 association for the solar industry, representing about  
9 1,000 companies, 260,000 employees, including utility  
10 scale, community solar, and distributed solar. We are  
11 supportive of utility scale, we are supportive of community  
12 solar, but we are not supportive of this application. We  
13 think it's not consistent with the code and we ask the  
14 Commission to use its discretion to take some time to  
15 prefect guidelines for this portion of the code. And to  
16 not approve this application today.

17 Thank you very much.

18 CHAIR HOCHSCHILD: Thank you. Is Dan here? Yeah,  
19 go ahead, Dan. To be followed by Dave Shelby.

20 MR. JACOBSON: Thank you very much. My name is Dan  
21 Jacobson with Environment California. I just want to make  
22 three really quick points here.

23 The first, I think we've heard it a lot this  
24 afternoon, and this morning, is talking about how this is  
25 critical for reducing the amount of GHG pollution that

1 we're putting in. We've all seen the ARB's report. The  
2 best place in our economy, where our GHGs are going down is  
3 in energy. This, including the RPS, including energy  
4 efficiency, is responsible for it.

5 Two, now things get a lot harder. If we're going  
6 to meet that 100 percent goal, we're going to have to not  
7 only electrify everything, including our cars and our  
8 buildings, but we're going to have to approve projects like  
9 offshore wind, geothermal, storage, all of that.

10 I would say that the only way that we're going to  
11 be able to do that is we have to be able to muster another  
12 kind of power, one that has not been talked about today,  
13 but that's political power.

14 The reason that we've been able to do all of the  
15 work that we've been able to do is not only because we have  
16 some of the smartest people in the room, and thank you to  
17 the staff for that and for the Commission, but also because  
18 in California we have that political power.

19 If you ask where does that political power come  
20 from, I would argue that it comes from the fact that when  
21 people put up solar panels, they become big advocates for  
22 clean energy. When they buy an electric car, they become  
23 big advocates for clean energy. Not only do they do it,  
24 but when their neighbors see it, they all of the sudden  
25 think, wait a second, I can do this.

1           This goal of hitting 100 percent becomes a lot  
2 more real, a lot more doable when you see your own neighbor  
3 doing it. When you see your own neighbors, and your  
4 schools, and people putting up the kind of clean energy  
5 that we need.

6           So, adopting a program like this, to me doesn't  
7 make sense, because you take away from that critical  
8 political power that we're going to need when we have to do  
9 these significantly harder things that are going to be put  
10 in front of us over the next couple of months and the next  
11 couple of years.

12           I would urge you to send us back to the drawing  
13 board. Let us work this out. Because we're going to need  
14 the people of California behind us in order to meet the  
15 goals that science says we have to. Thank you very much.

16           CHAIR HOCHSCHILD: Thank you. Now, let's move on  
17 to Dave Shelby, to be followed by Megan Shumway.

18           MR. SHELBY: Hi. My name's Dave Shelby and I thank  
19 you for the opportunity. I want to thank SMUD. It's a  
20 good utility, it's been lower cost and very reliable.

21           But about three years ago we put solar up on our  
22 roof. And we wanted to do it for clean energy. We were  
23 retiring and we wanted to keep our electric rates at a  
24 pretty stable rate. And we have saved a lot. I mean, by  
25 putting the solar up, we probably save 1,800, 2,000 a year.

1 And it's almost near zero, other than a connection fee to  
2 SMUD.

3 Twenty dollars a month -- or, twenty dollars a year  
4 really doesn't compete to the rooftop solar.

5 When batteries come down, I'd like to put battery  
6 into the house, also, to put more self-reliance on  
7 ourselves and our own home.

8 So, at this time, I'd like you to reject this  
9 appraisal, or what they want to do, and have them go back  
10 and maybe look at something that's more local. I can see  
11 it in an apartment building, or something like that, where  
12 it might be used, but individual persons it kind of takes  
13 away their choices. Thank you.

14 CHAIR HOCHSCHILD: Thank you. Let's move on to  
15 Megan Shumway, to be followed by Steve Uhler.

16 MS. SHUMWAY: Hello, I'm Megan Shumway. I'm a  
17 retired nurse and homeowner with rooftop solar. I want you  
18 to reject this proposal for a variety of reasons. It's not  
19 protective of the consumer. The consumer can't make  
20 decisions about battery storage. They can't make decisions  
21 about adding more panels. And they can't take control of  
22 their own energy.

23 And it seems like it's a slippery slope of the  
24 energy companies stealing the sunshine off our roofs. And  
25 I want the consumer protected in this regard.

1           We've lost our protections of our mineral rights  
2 under our homes. They can frack underneath us. They can  
3 take oil or coal, and with all the dangers that that  
4 presents for our home, and we have little recourse with  
5 that.

6           And I don't want to see the sunshine on my roof  
7 going down that same path. We are in an energy crisis and  
8 we need to have solar on every roof. And I think we should  
9 be promoting any program that gets the consumers to do that  
10 because it's a needed thing at this time in our history.  
11 Thanks.

12           CHAIR HOCHSCHILD: Thank you. Let's move on to  
13 Steve Uhler.

14           MR. UHLER: My name's Steve Uhler I actually  
15 wanted to comment on your deliberations. But my point  
16 would be it appears that there's going to be some rules  
17 that have to be written, since the Commission who handles  
18 tracking renewable energy credits, do not currently have  
19 any rule that deals with retiring on behalf of any body,  
20 other than a utility.

21           And I've been looking for an answer to why there's  
22 -- related to the rulemaking, you're required to comply  
23 with the APA, unless you have -- unless the statute  
24 expressly exempts. There are exemptions related to the  
25 computer software, but they're where the funds go



1 exemption. There is no express exemption.

2 So, there's some rulemaking that has to be done  
3 here before. As a former SolarShare customer, I'm hoping  
4 to learn what SolarShare is. But I seriously want to hear  
5 you deliberate over whether or not you'd be in violation of  
6 Title 1, Chapter 2 of the California Code of Regulations,  
7 which prohibits underground regulation.

8 I believe you are overlooking the situation that  
9 any time you write a rule, and particularly in this case,  
10 you're going to be the enforcement agency for how these  
11 RECs are tracked, you have to follow the APA.

12 Being that, I guess I can take it that you read all  
13 of my comments, then you already know I've already quoted  
14 the states in the Health and Safety Code that require you  
15 to follow the APA for the building standard.

16 So, whichever way you go, we're going to learn  
17 whether or not the Chapter 2 unit will be asking you  
18 questions, which is the Office of Administrative Law. So,  
19 you need to carefully consider that and consider whether or  
20 not you should even -- you should table this item until you  
21 find out more about whether or not you'll be violating the  
22 law as far as creating regulations.

23 So, that's my basic point. It's a point of law.  
24 You should carefully consider it. I want to hear you talk  
25 about it in your deliberations because I actually wanted to

1 speak about whether or not you did. Staff hasn't answered  
2 that. They've definitely pointed to that there's some  
3 rules that have to be made.

4 So, whether or not SMUD is going to make a separate  
5 account for each home, which may be costly, we need to know  
6 what those rules are. We have no idea what these rules  
7 will be and folks are supposed to comment on this.

8 So, table this agenda item until you find out about  
9 that. Thank you.

10 CHAIR HOCHSCHILD: Thank you. Is there anyone else  
11 in the room wishing to make a comment? Okay, let's go to  
12 the phone, starting with Jeff Parr. He's off?

13 Is Dan Gluesenkamp, from the California Native  
14 Plant Society on the line?

15 UNIDENTIFIED SPEAKER: I know he's coming.

16 CHAIR HOCHSCHILD: Should we go to another caller?  
17 Okay, let's move on to another caller. John Patterson?

18 Okay, let's move on to David Rosenfeld, from the  
19 Solar Rights Alliance.

20 MR. ROSENFELD: Hello. Can you hear me okay?

21 CHAIR HOCHSCHILD: Yeah. Go ahead, sir.

22 MR. ROSENFELD: Very good. Thank you,  
23 Commissioners, for letting me provide testimony. I'm David  
24 Rosenfeld, Solar Rights Alliance.

25 If SMUD's proposal goes through, the effect will be

145

1 as follows: Most new homes built in the Sacramento region  
2 will not have rooftop solar and storage on it. SMUD's  
3 proposal is designed precisely to incentivize builders to  
4 choose SolarShares, not rooftop solar and storage.

5 Yes, consumer demand for solar is strong, as your  
6 staff notes. But SMUD's proposal will short circuit that  
7 demand. If SMUD's proposal goes through, thousands of  
8 homeowners and renters will lose the chance to save  
9 hundreds of dollars a year, keep their power on during  
10 outages, and contribute to the energy resilience of the  
11 community.

12 It is inconceivable that anyone could argue that  
13 SMUD's proposal offers anything close to the benefit of  
14 true rooftop solar. You've seen the numbers. I won't  
15 repeat them. I do hope they give you significant pause.

16 But it gets worse. SMUD has conveniently omitted  
17 the fact that under SolarShares homeowners will have a very  
18 difficult time adding solar and storage later on, and  
19 that's because of SMUD's existing restrictions on adding  
20 solar capacity.

21 So, all this talk about increasing choice is,  
22 honestly, it's Orwellian. And that SMUD would propose such  
23 a program doesn't surprise those of us that have been close  
24 attention to SMUD recently. Their staff and many of their  
25 board members have made numerous unsubstantiated or false

1 claims about rooftop solar and distributed generation, and  
2 have attempted recently to adopt policies that would have  
3 utterly devastated the rooftop solar market and ruin the  
4 existing customer investments.

5 That they're now trying to use their monopoly power  
6 to keep solar off of new construction is consistent with  
7 their recent behavior.

8 But we do expect better from the California Energy  
9 Commission. The world understands California's Solar Homes  
10 Mandate as an initiative to put rooftop solar and storage  
11 on new homes. Rightfully so, the Solar Homes Mandates has  
12 inspired and captivated people around the world to follow  
13 California's action. All of this is now in danger of  
14 unraveling.

15 So, please, don't squander the opportunity before  
16 you. Please reject SMUD's proposal and send them back to  
17 the drawing board. Thank you.

18 CHAIR HOCHSCHILD: Thank you. Let's move on to Dan  
19 Gluesenkamp, from the California Native Plant Society.

20 MR. GLUESENKAMP: I agree with the comments that  
21 other people have made because it sounds like everyone's  
22 making a lot of good points for why this is a bad proposal.

23 I do want to say that we do have industrial scale  
24 solar in great abundance. We have tried it. We'll be  
25 continuing to do it. It has significant environmental

1 issues. It can cause tremendous impacts to biological  
2 diversity, natural communities, trees and vegetation.  
3 We're working that out. But in the mean time we, as a  
4 state, have decided that we want to try and invest in  
5 distributed as well, and see if that can resolve some of  
6 those problems.

7           Of course, none of that matters. What really  
8 matters is that you need to make this decision based on  
9 performance, you know, the cost of the electricity.

10           And I want to make a point that it doesn't really  
11 matter how cheap the electricity is, if you're not getting  
12 it. And that's a problem with the industrial scale energy  
13 development, you need large transmission corridors, which  
14 are prone to failure, prone to wildfire, and really not as  
15 reliable as the resilient distributed systems that this was  
16 supposed to promote.

17           Secondly, by promoting those distributed systems we  
18 achieve an economy of scale that's going to bring down the  
19 price of that electricity, not just for the new homes that  
20 are built, but for other people who are retrofitting with  
21 the new, and improved, and more efficient distributed  
22 systems.

23           And so, when you're making the decision based on  
24 performance, I ask that you give this project a little  
25 chance to work. It really hasn't run at all and it's far

1 too early to give up on it. I would say that, you know,  
2 there's a lot of uncertainties here and a lot of risk in  
3 scrapping this -- in voting in favor of SMUD's proposal and  
4 scrapping it there's a lot of risk and a lot of  
5 uncertainty.

6 The only thing that's certain is that you'll be  
7 destroying a good program and you'll get a lot of bad  
8 headlines due to that. And so, I really ask that you  
9 reject it.

10 And then, you know, finally, it sounds like there's  
11 a lot of people speaking from Sacramento. And I want to  
12 speak as a ratepayer for SDG&E in Northern San Diego  
13 County. It's very important to us down there. Wildfires  
14 have a new meaning down in San Diego County, where we have  
15 transmission corridors going through incredibly flammable  
16 zones.

17 And if you scrap this program at the behest of  
18 SMUD, those of us all around the state will be suffering  
19 from it. They're not all represented on this phone call,  
20 but we will be wishing that you hadn't.

21 So, I please ask that you pay attention to the risk  
22 and the uncertainty of this, and scrap it, and give the  
23 program a little more time to work out and see how it  
24 prevails.

25 CHAIR HOCHSCHILD: Well, thank you. That concludes

1 public comment. Thanks to everyone on the phone and in the  
2 room for sharing their comments.

3 Let's turn to staff, now, if you'd like to respond  
4 to any of the points that were particularly germane.

5 MR. PENNINGTON: This is Bill Pennington. So, one  
6 of the areas here that is under debate is related to do the  
7 standards require equivalent benefits with rooftop solar.  
8 And they don't in the way that commenters are saying.

9 One basis for this concern is a reference to the  
10 residential compliance manual that has no regulatory effect  
11 and is informational, only. So, you know, it's not a  
12 regulation in and of itself.

13 But reading what it says, the section that has been  
14 referred to, only a few of the words in the sentence there  
15 is being referred to. And instead, a longer reading, the  
16 section is about demonstrating the several criteria that  
17 are specified in 10-115 of the standards. And those  
18 criteria is what this document is trying to describe.

19 And you have to achieve equivalent benefits based  
20 on those criteria. And the benefits that are addressed in  
21 10-115 that have to be equivalent are energy performance,  
22 durability is an attempt to be equivalent, and equivalent  
23 in reductions in energy consumption. Those are the only  
24 things in 10-115 that's called out that needs to match up  
25 with rooftop solar.

1           So, it's misconstruing this, unfortunately, this  
2 compliance manual to say that all of the other benefits  
3 that rooftop solar could bring that this compliance option,  
4 by statute, has to be based in energy terms has to deliver  
5 all of these other attributes.

6           So, it would be lovely if we could do that, but  
7 that's not what the requirement's about at all.

8           MR. CHALMERS: Hi, this is Matt Chalmers with the  
9 Chief Counsel's Office. I'd like to add a little  
10 clarification to the 10-115(a)(3). There were some legal  
11 arguments that were invoked about these benefits. I'd just  
12 like to note that this section is dedicated building energy  
13 savings benefits. The benefits that we're speaking to are  
14 energy.

15           If we look down to 3(a), (b), and (c), these are  
16 spelled out. And immediately underneath it I read, and  
17 quote: "The reduction in the building's energy bill  
18 resulting from (a), (b) or (c) above shall be greater than  
19 the added cost of the building, resulting in the building's  
20 share in the community shared solar or battery system. So,  
21 this section addresses that. And we understand that we're  
22 in compliance with this section for this application.

23           CHAIR HOCHSCHILD: Okay, thank you.

24           Just, SMUD, any other points you wanted to make,  
25 from anything we heard, before we turn it over to



1 Commissioner McAllister? Did you want to --

2 COMMISSIONER MCALLISTER: Oh, just keep on staff.  
3 I saw you fiercely taking notes. I mean, there were a  
4 number of assertions made during the course of the comments  
5 and I just want to make sure that where you believe that  
6 those were not correct, that you have a chance to say so.

7 MR. MEYER: Okay, this is Christopher Meyer, I'm  
8 Manager of the Building Standards Office.

9 Just to be very clear that this is an option. The  
10 staff was, you know, very adamant throughout the rulemaking  
11 that we were advocates of rooftop solar. We thought it was  
12 important enough that that is the standard. This is an  
13 alternative to that.

14 And what I mean alternative, rooftop solar has to  
15 be an option in SMUD's territory. It has to be a cost  
16 effective option for the community solar to exist. If  
17 anything happens to that cost effectiveness, any future  
18 changes in energy metering in SMUD's territory, the Energy  
19 Commission has 10109(k) as an option to remove the PV  
20 requirement, which ultimately would invalidate the  
21 community solar program that SMUD is here to get approval  
22 for.

23 So, basically, by coming here with this community  
24 solar program SMUD is, in essence, committing to making  
25 sure that they have a cost effective rooftop PV option for

1 all of their customers. If that goes away as a cost  
2 effective option, there is no community solar program under  
3 this.

4 So, that's one of the things as far as when people  
5 talk about the market also, you know, being an option when  
6 staff has spoken with a lot of the people who have made  
7 comments here today, and we've emphasized the fact that  
8 this is a market choice.

9 And one of the things that the staff is going to be  
10 working on is getting the information out there so that  
11 customers understand the values between a rooftop system  
12 and a community system, and now the different ones have  
13 options.

14 This was an alternative that, as Bill mentioned, in  
15 the IEPR we were directed to put as an alternative in  
16 there. And we will get the information out there so people  
17 can make the right choice.

18 COMMISSIONER MCALLISTER: So, can I -- I want to  
19 just follow up on that. So, you know, a lot of comments  
20 have been made about, you know, benefits of rooftop that  
21 really, up to now, have not been part of our brief in the  
22 narrower Building Code discussion, and I appreciate that.  
23 There's a broad solar market out there. There's a demand  
24 for certain characteristics. Resilience, obviously, is on  
25 the -- everybody's radar screen, now, in a way that it

1 hasn't been incorporated into the Building Code directly.  
2 And so, maybe we can have that conversation in the next  
3 round, in the update, and how to value that resilience and  
4 for purposes, you know, in energy and energy cost kind of  
5 terms, like the Building Code requires. We have not done  
6 that and that has not been part of our brief.

7           The immediate concern that I have right now is  
8 really ask, trying to understand the customer's experience.  
9 Will that -- who is committing? Say, in a production build  
10 environment, who is committing to one option or the other?

11           And maybe this is a perhaps speculative question  
12 for the builders, certainly for staff, and certainly for  
13 SMUD. Is a customer, showing up to buy the home, having  
14 already had this decision made for them?

15           MR. MEYER: I can talk to this very briefly and  
16 then I'll hand this over to SMUD. That is definitely a  
17 question that staff has had and I noticed a lot of the  
18 commenters have the same issue. So, that's why the  
19 education is going to be important.

20           We see this as a potential market differentiator  
21 for different builders. There are some builders that are  
22 vertically integrated, that have PV as part of their  
23 package. Them getting the message out in the value  
24 proposition to homeowners, who are making that initial  
25 decision to purchase a home of saying, our house has all of

1 these benefits. And we've heard people talking about the  
2 economic benefits under net energy metering to a customer  
3 who owns their PV system are much different than someone  
4 who has a community solar.

5 So, yes, the decision is the builder's decision and  
6 the person who comes in and purchases decides between a  
7 house with PV and the house with community solar. That is  
8 a decision that comes in after the builder's already  
9 decided to buy it.

10 But what we're trying to make sure is that the  
11 homeowner has the information, so when they make that  
12 decision do they want to go under a contract with a builder  
13 who's done community solar, or do they want to go into a  
14 contract with a builder who's providing a rooftop system.  
15 We want them to understand the value propositions there, so  
16 that the customer is getting the value from our regulations  
17 that they expect.

18 MR. TUTT: So, in terms of who's committing, this  
19 is Tim Tutt from SMUD. When a builder signs an agreement  
20 with us to participate in neighborhood solar shares, they  
21 are committing that they will meet the compliance with the  
22 standards using our program. And they will include codes,  
23 covenants and restrictions in their development so that  
24 those homes are committed to participating in the program  
25 for 20 years. As Chris said, we're going to be providing

155

1 full information to prospective homebuyers to have them  
2 understand what their commitment is. Then, they have the  
3 choice of being in that particular development or looking  
4 for another development which isn't participating,  
5 potentially, in our program.

6 The 20-year requirement is there essentially to  
7 meet the durability requirement in the standards. If you  
8 put on a rooftop system, the expectation is that it will be  
9 there on the roof for 20 years. It's not a guarantee. I  
10 mean, somebody could tear it off if they wanted to.

11 But the Commission certainly didn't want a  
12 community solar option in which somebody, a builder could  
13 sign up participants and then have those participants  
14 decide not to continue with the program. Then, there's no  
15 solar.

16 Right now, what we're doing is providing equivalent  
17 or better solar to the rooftop with our community solar  
18 option. And it has the same benefit, if not greater, to  
19 the environment and to GHG reductions as a rooftop choice  
20 by consumers.

21 COMMISSIONER MCALLISTER: Thanks. I guess, Bob,  
22 did you want to -- Mr. Raymer, did you want to comment on  
23 that in terms of just I'm curious about what the builders,  
24 how the builders see this. And if they are in a situation  
25 where they have to commit all of the homes in a production

1 build to one model or another before they've even met a  
2 prospective buyer.

3 MR. RAYMER: This is Bob Raymer with CBI. The  
4 answer is it depends. And, quite frankly, as I mentioned  
5 before, given what's happened in PG&E's territory, there's  
6 an enormous demand for onsite, rooftop solar with battery  
7 backup. That's going to increase significantly.

8 I don't see any type of a surge by production,  
9 single-family homebuilders to the SMUD program. It's  
10 possible that can change. But from what I've been hearing  
11 at the last two meetings that we've had, our quarterly get-  
12 togethers, that doesn't seem to be the case.

13 At the same time, there does seem to be a large  
14 degree of attractiveness on multi-family builders,  
15 particularly those during a construction within the urban  
16 Sacramento areas. The infill projects and the mixed use  
17 projects, that seems to be where the SMUD program is going  
18 to find its niche. And largely because it's so difficult  
19 to gain adequate roof space under -- basically, you've got  
20 three dwelling units under the same piece of roof. And  
21 it's very difficult to comply with the CEC standards

22 Fortunately, they give you offramps. But the  
23 builders aren't necessarily looking for the offramps, they  
24 want to comply with the regs. This provides that option.

25 I think we'll just agree to disagree that an

1 approval of the SMUD program is going to create a tidal  
2 wave to that. I don't see that happening at all and that's  
3 just my best understanding of where our builders are  
4 thinking right now. Thank you.

5 COMMISSIONER MCALLISTER: So, let's see, I think  
6 maybe just a process order. I have some questions that I  
7 want to get resolved. I guess I'm going to continue asking  
8 a few questions. I've got two more that I want to --

9 CHAIR HOCHSCHILD: Okay, just to be clear --

10 COMMISSIONER MCALLISTER: Yeah.

11 CHAIR HOCHSCHILD: -- we're going to finish this  
12 item and vote it out, and then take a lunch break, and then  
13 come back and finish the other items. I have to go to  
14 another speaking engagement, so Vice Chair Scott will take  
15 over after this item, yeah.

16 COMMISSIONER MCALLISTER: Okay.

17 COMMISSIONER MONAHAN: Commissioner, may I?

18 COMMISSIONER MCALLISTER: So, I guess I'm trying to  
19 kind of get my questions answered and then perhaps we can  
20 open it back up for other people. I don't know. What's  
21 that?

22 Yeah, okay. So, I want to -- so, we already -- you  
23 know, we sent SMUD back to the drawing board a number of  
24 times. This was on the meeting, you know, several months  
25 in a row perspective and it got pulled because we were

1 asking SMUD to keep sharpening its pencil.

2 And, you know, it took several iterations for it to  
3 even get to this point to be considered on a Business  
4 Meeting. And it had to be additional, which it is. I  
5 think, you know, some folks have said they don't believe it  
6 is, but it is. I believe it is.

7 And, you know, RPS still has to be complied with,  
8 without whatever capacity gets dedicated to this.

9 And it had to provide locked in benefits to the  
10 customer relative to -- I think what Bill said, relative to  
11 the standard non-solar tariff, essentially. Okay. Up to  
12 now premium -- and I'm going to talk a little bit, but I  
13 still have a couple of questions that I want to get  
14 resolved.

15 Up to now, you know, premium -- or, SolarShares  
16 programs across the state have been premium. They've been,  
17 you know, opt in, voluntary, customers have paid more for a  
18 100 percent solar 100 percent renewables project and so --  
19 or product. So, this, actually, makes it cheaper than the  
20 standard residential rate and, you know, I think that's  
21 progress.

22 You know, that's something that the IOUs, for  
23 example, have not been willing to do. And there are, you  
24 know, constraints about who can wheel over the distribution  
25 grid and those are real constraints. Those aren't anything



1 that we're going to resolve here at the Energy Commission,  
2 at least not in the near term.

3 So, you know, in that respect I think the proposal  
4 meets the intent of the cost effectiveness requirements of  
5 the standards. Now, is it equivalent to rooftop? No, it  
6 is not. And I think we all pretty much can agree on that.

7 Now, and I want to acknowledge staff, you know,  
8 working with SMUD and all stakeholders to get to their  
9 sharp pencils and figure out how to get a proposal in front  
10 of us at the Business Meeting.

11 So, let's see, and I'm actually really happy to see  
12 all the turnout. I mean, the comments have been  
13 illuminating. And I think there's, obviously, a lot of  
14 passionately held and very informed positions across the  
15 industry. And you all know my history in the solar  
16 industry. You know, we could go down many, many rabbit  
17 holes and, you know, and many of us in the room have  
18 installed lots of solar systems with their own two hands,  
19 including myself. And probably, most of us live in solar  
20 homes, and many of us have EVs, and we're living where  
21 California is and needs to go.

22 So, I just want to manifest, you know, some  
23 sympathy with that position.

24 You know, many points have been made arguing  
25 passionately for this solar future, certainly for rooftop.

1 And I think that's all for the good. Many of them are not  
2 germane to the conversation with Title 24 Building  
3 Efficiency Standards. And so, I think we need to be  
4 disciplined to figure out which ones are.

5 Nobody's scrapping -- certainly, if we vote this  
6 in, nobody's scrapping the rooftop requirement. It's still  
7 there. And I think we can certainly commit to monitoring  
8 how the marketplace is evolving, if we think there's gaming  
9 going on. If we don't think the accounting is being done  
10 properly. If we can, you know, be able to put those  
11 mechanisms in place to hold SMUD accountable if, indeed, we  
12 vote this out.

13 So, I have two other lines of questioning that I  
14 want to get resolved. One is, one of the commenters said  
15 that batteries cannot -- would no longer be able to be  
16 used. And I'm going to throw demand responsiveness in  
17 there. You know, one of the intents -- absolutely, you  
18 know, decarbonization is our overarching goal right now.  
19 It's not necessarily to promote an individual technology  
20 over all others. Okay. And so, decarbonization, we have  
21 to keep that frame. That's something that is just ever  
22 more clear in our policy environment.

23 Load flexibility and demand responsiveness is key  
24 to getting decarbonization done. And one of the intents of  
25 the Building Code update absolutely has been to promote

1 those technologies, smart, grid resilience technologies  
2 like storage, like demand responsiveness.

3 So, I would be very concerned if we thought that  
4 batteries and, you know, behind-the-meter flexibility would  
5 be negatively impacted by adoption of this. So, if staff  
6 could address that?

7 MR. PENNINGTON: Okay. So, JA-12 has a requirement  
8 in it that -- for there to be compliance credit for battery  
9 storage, that you have to have onsite solar in conjunction  
10 with that battery storage. And that requirement evolved  
11 from a lot of interaction with the utilities about whether  
12 grid-charged batteries were appropriate or not.

13 And the consensus of that, although there was some  
14 difference of opinion among the utilities, the consensus  
15 was that, no, we didn't want to have grid charged batteries  
16 and provide that credit.

17 So, you know, JA-12 is an intent to provide  
18 compliance credits for batteries, but the fundamental  
19 requirement is for rooftop solar. And so, JA-12's kind of  
20 an appendix to that.

21 So, basically, JA-12 says, no, you have to -- you  
22 can't get battery storage credit, compliance credit unless  
23 you have a rooftop solar.

24 COMMISSIONER MCALLISTER: And SMUD's proposal  
25 doesn't have any clause or any condition for behind-the-

1 meter batteries within the commitment to community solar  
2 capacity?

3 MR. PENNINGTON: Yeah, correct. We didn't see that  
4 SolarShares was qualifying as rooftop solar and, so, it was  
5 not meeting the JA-12 expectation.

6 COMMISSIONER MCALLISTER: Okay, I got that. So, as  
7 a renewables enhancing, decarbonization strategy, which I  
8 think community solar is, or however we define community  
9 solar and that's the third thing I want to talk about that  
10 --

11 MR. PENNINGTON: There's a caveat here. Let me add  
12 to that, if I may.

13 COMMISSIONER MCALLISTER: Okay.

14 MR. PENNINGTON: Sorry for interrupting you.

15 So, the community solar also has the option for  
16 community batteries. So, it could be community storage in  
17 combination with community solar is a possible outcome that  
18 is clearly, explicitly allowed. So, if there was battery  
19 storage in conjunction with the community solar storage,  
20 then we could figure out what that was worth in TDV terms,  
21 and that could be credited.

22 COMMISSIONER MCALLISTER: Is there, today?

23 MR. PENNINGTON: No.

24 COMMISSIONER MCALLISTER: Okay. Okay, thanks.

25 Let's see, and then -- well, I guess I have two

1 more questions, really. This is important, right, so we  
2 want to get right. Yeah, go ahead.

3 MR. TUTT: If I may, I just wanted to point out  
4 that the SMUD Neighborhood SolarShares program in no way  
5 prohibits consumers from adding batteries to their homes.  
6 We understand that they don't get a compliance credit, the  
7 builder wouldn't. But the consumer can add a battery  
8 later. It's not prohibited in any way by our program.

9 COMMISSIONER MCALLISTER: Yeah. I mean, I guess, I  
10 think a lot of the comments have been, I think, confusing.  
11 You know, we're talking as if we're prohibiting something,  
12 right? But we're talking about minimum standards here.  
13 Right? So, the consumers are free to do a lot of things.  
14 And what we're talking about doing is what we're going to  
15 make everybody do. And so, I think that distinction, so,  
16 certainly, that's great. You'll interconnect a battery.  
17 But I think in terms of the compliance credit that would  
18 have otherwise been available to a customer, but wouldn't  
19 be because they want this other option, that might be a  
20 concern.

21 So, Bernadette really wants to say something, and  
22 I'm going to let you do it.

23 MS. DEL CHIARO: Thank you, Commissioner, so much.  
24 I know you want to get this right. The customer would be  
25 prohibited, under SMUD's proposal to add onsite solar after

1 the fact, except, unless they can prove their load  
2 increased according to the calculations done from the get  
3 go, and then they size their system only to the delta of  
4 that increased load. That's a pretty severe restriction  
5 for the customer.

6 COMMISSIONER MCALLISTER: Yeah.

7 MS. DEL CHIARO: The second is the investment tax  
8 credit is only if you add solar. So, the customer is free  
9 to add storage, but they're not going to get the economics  
10 that they need to make that purchase.

11 COMMISSIONER MCALLISTER: So, yeah, we've been  
12 talking about batteries. So, I wasn't asking about  
13 incremental storage but -- I mean, incremental solar, just  
14 about the storage piece.

15 MS. DEL CHIARO: No, but you were wondering about  
16 the consumer experience earlier, and I really appreciate  
17 you asking that question. I think when the consumer steps  
18 onto a building site that is a partner with SMUD, I don't  
19 think they're going to fully understand that this green  
20 program that they are buying into is actually going to tie  
21 their hands from being able to be self-sufficient, and have  
22 their own onsite energy system. In the future, for the  
23 next 20 years.

24 COMMISSIONER MCALLISTER: Okay, thanks for that.  
25 So, let's see, so I appreciate all the different comments.

165

1 But I just want to make sure we're getting, we're talking  
2 about what is the scope within Title 24. And, you know,  
3 we're not trying to control the whole world here, we're  
4 trying to control the building, the Title 24 new  
5 construction.

6 So, I want to talk about this definition of  
7 community solar. And there were some legal arguments made.  
8 And I guess, maybe I'm going to look to Matt and to the  
9 Chief Counsel's Office to talk about whether that local  
10 government does land use. You know, we don't do land use  
11 at the Energy Commission. And so, I want to tread really  
12 carefully here. But I also, I do very well vividly  
13 remember the conversation we had about the original Title  
14 24, and I want to make sure that the spirit of that, which  
15 I think meant different things to different people. I  
16 mean, I think a lot of the recollections that people have  
17 manifested aren't necessarily in alignment with my  
18 recollection about, you know, exactly the intent was. And  
19 I think, you know, I have a pretty good idea what the  
20 intent was.

21 But the community moniker has been problematic for  
22 years. I mean, Lois Wolk tried to get a community solar  
23 build done. She had lots of different stakeholders. Many  
24 of you were probably involved in that. And that process,  
25 over several legislative sessions, did not figure out what

1 community really was, as far as I know. But it was a  
2 difficult topic.

3 And finding cost effectiveness was also very  
4 difficult for that conversation. So, anyway, with that,  
5 Matt?

6 MR. CHALMERS: Sure. So, to speak to that, I want  
7 to just reiterate the set of points that Bill made at the  
8 outset of this item, which is that we are looking at the  
9 plain text of 10-115 here. And to the extent that the  
10 plain text of 10-115 doesn't specify a size requirement,  
11 doesn't specify a location requirement -- and you'll note,  
12 if we get into -- I don't want to get too deep into the  
13 weeds here because I know we're over time. But there are  
14 places where this speaks to renewable systems, it speaks to  
15 battery storage systems. It's important to understand that  
16 the text of 115, as I'm reading and as all the attorneys  
17 that I've worked with on this read it, this is designed to  
18 be flexible language. That's intentional.

19 So, to the extent that we're reading something into  
20 the text that isn't there, I would be more concerned about  
21 that. This is flexible language.

22 Does that answer your question?

23 COMMISSIONER MCALLISTER: Well, I guess the flip  
24 side of that would be do we have the authority to define  
25 community in a way that is more restrictive than that?

167



1           MR. CHALMERS: Absolutely. In an intervening code  
2 cycle, in the 2022 code cycle we go through, take that  
3 through the APA process and the CBSC process. I don't see  
4 any reason we couldn't.

5           COMMISSIONER MCALLISTER: So, that would have to be  
6 in amendment to the rulemaking, itself, or a new --

7           MR. CHALMERS: That's my understanding. Now, I  
8 will note that, as has been pointed out, the Commission  
9 does have broad discretion in how the Commission wishes to  
10 vote today. But to the extent that we want to then go back  
11 in and further define and refine the definition of  
12 community, that's something that should occur in an  
13 intervening or 2022 code cycle.

14           COMMISSIONER MCALLISTER: Okay, thanks. So,  
15 talking about the -- going back to the batteries, just to  
16 make sure we have it crystal clear, there is no pathway for  
17 getting compliance credit for behind-the-meter battery  
18 under the community solar scenario. Is that a true  
19 statement?

20           MR. SHIRAKH: Mazi Shirakh, CEC staff. The way JA-  
21 12 is currently written, the battery must be coupled with  
22 an onsite PV system. There's another path if the battery  
23 is also located at the community resource, where the farm  
24 is. That can also get the credit.

25           But I want to take a moment to describe what this

1 credit is. When you couple a PV system with a battery  
2 storage system, there's a large credit in EDR terms. But  
3 most of that is only used if a local community adopts a  
4 REACH code that requires a lower EDR score than Part 6.  
5 You know, there's a tier 1 or a tier 2.

6 So, most of that EDR score is only used to lower  
7 the EDR score towards those targets. A small portion of  
8 that EDR target, about roughly 30 percent, 25 percent, can  
9 be used, may be used to do tradeoffs against building  
10 envelope features.

11 So, a battery storage system that's installed, that  
12 cannot claim that credit, will forego those benefits,  
13 lowering the EDR score towards the ZNE target or doing that  
14 tradeoff.

15 There is no language that prohibits the homes from  
16 installing the PV system -- or, I'm sorry, the battery  
17 storage system. They can be installed. It's just they  
18 won't enjoy those benefits.

19 COMMISSIONER MCALLISTER: Okay. So, there's no  
20 compliance credit for a behind-the-meter battery with no  
21 solar on the roof. Okay.

22 MR. PENNINGTON: So, a consequence of that, I would  
23 say, is that the builder that is considering doing battery  
24 storage in conjunction with the PV system in order to  
25 provide a better product and a, you know, current thinking

1 product, will have an advantage to stick with rooftop solar  
2 because they'll get a little bit of compliance credit that  
3 they could use against the tough measures that they are  
4 resisting related to the building envelope.

5 COMMISSIONER MCALLISTER: Okay.

6 MR. PENNINGTON: If they go community solar, they  
7 lose that.

8 COMMISSIONER MCALLISTER: Okay. And so, I want to  
9 point out one other thing. I'm sorry to keep the  
10 microphone here longer than probably everybody's got  
11 patience for, and everybody's hungry because it's almost 2  
12 o'clock, but this is really important.

13 So, and I want to also just point out that I did  
14 not take meetings with stakeholders over the last month on  
15 this issue because -- and I didn't take them with anybody,  
16 okay, because I wanted to have this conversation right here  
17 and talk through some of these issues in public. Okay,  
18 that's what our process is supposed to do.

19 There's a lot of detail here. And so, I think it's  
20 really important to get right the signals to the  
21 marketplace that we need to have the buildings that can  
22 respond to our reliability needs, our grid reliability  
23 needs, and certainly a nod to resilience. You know, given  
24 the fire seasons we've had over the last few years, even  
25 though that hasn't been front and center in the development

170

1 of the Code itself. Okay, I want to be clear about that.  
2 But, you know, again, this is not -- so, I know that I've  
3 got lots of high fives. Everybody talked about that, when  
4 we got the regulations through and the Building Standards  
5 Commission approved them. But the goal is decarbonization,  
6 right. It's not to support one particular sliver of the  
7 solar industry. We need it all, okay. And I believe this  
8 is additional and I believe that rooftop solar can compete  
9 perfectly well with the other options that are out there.  
10 The benefits are there and the marketplace is supporting  
11 that.

12 And we've actually heard some of the solar  
13 companies, that are in this room, in the last few days say  
14 how robust they thought the market is going to be just on  
15 the natural because of all the resilience upside.

16 Okay, so the sky is not going to fall either way.  
17 And I think, sort of some of the comments to that effect I  
18 think are a little bit ill advised.

19 I have one other question for SMUD directly. What  
20 is your position and possible future employment of virtual  
21 -- of VNEM?

22 MR. LINS: Hi. Steve Lins from SMUD. We have a  
23 robust outreach process right now to look at all things,  
24 net energy metering 2.0. We will be considering our rate  
25 structure, VNEM. And as we finish that process, which is

1 going to take us about 12 to 18 months, at the end of that  
2 process we'll have an informed position.

3 We've got technical groups and stakeholder groups  
4 involved in this process. We're doing benefit of solar  
5 studies, as well. But right now, we've done a pilot in the  
6 past and that pilot's closed, but we're trying to look at  
7 the next generation and we're not going to be able to do  
8 that until it's informed by this kind of stakeholder  
9 process that we've just started, which is a 12 to 18 month  
10 process.

11 COMMISSIONER MCALLISTER: So, the IOUs, at the  
12 behest of the PUC, have virtual net meeting and are able to  
13 do that attribution. Are you -- you think it's likely that  
14 you're going to end up there?

15 MR. LINS: At this point, we just don't know.  
16 We've got a robust process. It's hard to say how it's  
17 going to turn out. We're not sure what the benefit of  
18 solar studies are going to look like. And we're not sure  
19 what our net energy metering rate structure's going to look  
20 like, so I think at this point we just don't know.

21 COMMISSIONER MCALLISTER: Yeah, sorry, I don't like  
22 to monopolize, but I do like to get answers.

23 So, let's see, let me just take a moment to make  
24 sure I've gotten through all my notes here. Yeah, why  
25 don't --

1 CHAIR HOCHSCHILD: Let's move on to other  
2 Commissioners.

3 COMMISSIONER MCALLISTER: And I'll come back if I  
4 need to, yeah.

5 VICE CHAIR SCOTT: Yeah, sure. I'm not sure that I  
6 have a question, per se, but I did have some thoughts as  
7 we've listened to the dialogue. I also have not taken any  
8 meetings with stakeholders, but I have read everything that  
9 came through on the docket.

10 And for me, I think it's a little bit problematic  
11 the way that this is set up. I understand and I support  
12 the need for flexibility, right, we've got to make sure  
13 we've got our multi-family homes and buildings. We need to  
14 make sure low income communities and communities that are  
15 defined under CalEnviroScreen as disadvantaged are included  
16 as we're making this transition, right. And so, the  
17 flexibility that we weaved in makes a lot of sense to me  
18 and I'm glad that we have it there.

19 I'm worried about the broadness that I see within  
20 the proposal. It seems to me that potentially every house  
21 that's in SMUD territory could be built and use the  
22 SolarShares program, and not have solar or storage on it,  
23 the way that I read the proposal that's here before me.  
24 And the broadness of that is what's concerning to me.  
25 Because then, I do think that we are missing some of the

1 options that we would want to have in place as we make this  
2 transition to a carbon neutral energy system.

3           And, again, kind of making sure that it's  
4 equitable, that we're including everybody, that we can  
5 bring everyone along is really important. And so, I worry  
6 that we might, because it's so broad, be tilting too far to  
7 the SolarShares direction versus kind of where do we want  
8 homes that do have solar and storage versus communities  
9 that have the SolarShares program.

10           And I think about it a lot, too, it comes back to  
11 kind of like the affordable housing question, reliable  
12 energy question, the emissions reductions that we're  
13 looking for, and the energy savings in order to get to  
14 carbon neutral, as Commissioner McAllister has said.

15           So, you know, I think that the other thing that I  
16 was thinking about, which is not sort of just the broadness  
17 of the way that the current proposal is, was within Bill's  
18 presentations on slide 5 and 6, I think, it's going to be  
19 an immense administrative burden to have hundreds or  
20 thousands of homes where we need clear accountability,  
21 where we're trying to show monthly savings and get that  
22 information back to those homeowners, and over multiple  
23 decades. Like, I just can't quite wrap my brain around  
24 what that looks like to actually make sure.

25           And that's really important, right, we want to

1 demonstrate the compliance in this space. Because again,  
2 it all ties back to moving our state towards the clean  
3 energy standards and towards the carbon neutral.

4 So, these are the things that I'm kind of thinking  
5 about, struggling with as we talk this through right here  
6 on the dais, but I wanted to put that out there while  
7 Commissioner McAllister was gathering the rest of his  
8 questions and thoughts.

9 COMMISSIONER MCALLISTER: Thanks.

10 VICE CHAIR SCOTT: Yeah.

11 CHAIR HOCHSCHILD: You had more questions?

12 COMMISSIONER MCALLISTER: Yes.

13 MR. PENNINGTON: Is it possible for me to react to  
14 Commissioner Scott's --

15 CHAIR HOCHSCHILD: Yeah, go ahead, sir. Yeah.

16 MR. PENNINGTON: So, it is a huge burden to  
17 administer these programs correctly. That's completely on  
18 the applicant to do and they have to commit to doing it.  
19 And there's an accountability requirement in here that says  
20 any stakeholder has the right to object to what's going on.  
21 And the Commission can, you know, address that.

22 So, we don't see the Commission, you know, on an  
23 ongoing basis doing all the tracking. SMUD has committed  
24 to do a huge amount of tracking. Thank God there are  
25 WREGIS tools that enable that to be done reasonably. And

175



1 maybe a good part of solar's already going through that  
2 kind of a tracking system.

3 In addition, SMUD has committed to providing annual  
4 reports to the Commission on what is the progress of the  
5 shares that they are allocated to specific homes. So,  
6 yeah, I would agree that this is hard. And this actually  
7 might discourage a wide, you know, swath of a lot of  
8 utilities taking this on. A lot of smaller POU's might  
9 really not have the ability to take this on, whereas a big  
10 one maybe does have the ability to do, you know, this  
11 larger accounting thing.

12 So, this actually might be a discouragement towards  
13 this alternative just kind of exploding and taking over the  
14 whole market. Because this is definitely a big lift.

15 MR. HAMZAWI: Can I add a little bit to that, if  
16 that's okay?

17 CHAIR HOCHSCHILD: Yeah, go ahead.

18 MR. HAMZAWI: Sorry, Ed Hamzawi with SMUD, Director  
19 of Advanced Energy Solutions.

20 Yeah, we -- I mean, you're right, it's a major  
21 process to track these and we do that, currently, with any  
22 of our other renewable energy programs. We have the  
23 accounting systems and reporting systems set up for our  
24 RPS, for our voluntary renewable energy programs, our  
25 Greenergy programs. And so, this is another tranche to add

1 to that whole process that we're prepared to do, and have  
2 committed to do that in our obligation.

3 COMMISSIONER MCALLISTER: Okay.

4 CHAIR HOCHSCHILD: Other Commissioners?  
5 Commissioner Douglas, anything?

6 COMMISSIONER DOUGLAS: Yeah, I'm still -- I'm  
7 thinking about it. You know, I've reviewed the materials  
8 in the docket. I also did not take meetings on it. I  
9 think we could have taken meetings all week on it, for many  
10 weeks, but I thought it was better to hear from people and  
11 in public, at the meeting.

12 CHAIR HOCHSCHILD: Go ahead, Commissioner Monahan.

13 COMMISSIONER MONAHAN: Yeah. Well, I'm the newest  
14 Commissioner and I wasn't involved in developing the  
15 original language in the regulations, so this has been  
16 really informative. And I was, too, looking forward to  
17 this discussion to learn from all of you the history of how  
18 the language got developed.

19 And the fact that there was no specific definition  
20 for community, the fact that the energy -- the savings, the  
21 definition was so narrow that a \$20 per year benefit,  
22 that's not equivalent to the \$300 per year benefit that we  
23 estimated at the Commission, is troubling to me that the  
24 language isn't more specific. Because it does -- it does  
25 feel like, you know, the level of opposition that we've

177

1 heard from all the groups here.

2 And I just want to say thanks to everybody for  
3 coming, and waiting, and participating in this process.  
4 I've been on the other side and I know how hard it is to  
5 wait and want to give your comments. So, thank you all for  
6 participating. This process has been really helpful to  
7 hear all the different comments.

8 And I'm curious from SMUD, to hear from SMUD more  
9 about why the \$20 per year, and this question around --  
10 that Vice Chair Scott raised around how do we make sure  
11 that everybody benefits from this transition to clean  
12 energy? It's worrisome to me to hear that it's the multi-  
13 family dwellings that are probably going to capitalize on  
14 this. They're the ones that actually could use the savings  
15 in terms of reduced rent for the folks that are in those  
16 buildings, and that's deeply concerning to me. So, I just  
17 would love to hear your response to that.

18 COMMISSIONER DOUGLAS: I think -- you know,  
19 Commissioner Monahan, I think SMUD should answer that  
20 question. I did want to say, just from the perspective of,  
21 you know, because I led a session of the Building Standards  
22 Update, and then when Commissioner McAllister started, he  
23 took on efficiency and led the next update. And so, you  
24 know, I am pretty steeped in the history of the updates of  
25 the Building Standards getting us towards the zero net

1 energy goals, and the rooftop solar mandate.

2           You know, and I will say that, you know, the debate  
3 at the time when we were considering the standards update,  
4 and the requirement for solar on new homes was, you know,  
5 not so much framed as how do we maximize the benefit for  
6 every consumer and every new home, although we certainly  
7 want to, and it's certainly their desire. You know, the  
8 desire of everyone who buys a house to maximize their  
9 benefit however they define that.

10           But it was cost effectiveness. It was ensuring  
11 that as we move forward and adopted this requirement, we  
12 were going to meet our cost effectiveness requirements.  
13 And I think we demonstrated pretty convincingly that the  
14 standard rooftop solar option would do that.

15           And we provided an incentive in there.  
16 Commissioner McAllister can speak much better about this  
17 than I can, by the way. But we provided an incentive for  
18 solar with storage because we believed that that was a  
19 value proposition that was tremendous, but that did not, on  
20 its face, meet our cost effectiveness requirement such that  
21 we could actually make it mandatory.

22           And the community solar option was an important  
23 opportunity or alternative in that debate to ensure, you  
24 know, not necessarily that using that option would get you  
25 as much of a decrease on your electricity bills as you

1 would get in a large house, with a swimming pool and, you  
2 know, all sorts of opportunities to save electricity,  
3 right. But that it would be cost effective. That for the  
4 consumer, going into that house, it would save them money,  
5 not cost them money.

6           And I think, you know, I think it's -- I think some  
7 of the disconnect we're hearing in this debate is that  
8 difference in outlook from this requirement originating,  
9 and our desire to meet our energy goals, but the cost  
10 effectiveness framework. You know, is this at least plus?  
11 Is this a plus for the consumer? Can we demonstrate that  
12 this is a plus for people who are buying their house,  
13 whether it's in a multi-family unit or a single-family  
14 unit?

15           So, that's some of the context from my perspective.  
16 I'm also interested in SMUD's response to your question.

17           MR. TUTT: So, as Commissioner McAllister pointed  
18 out, this is not a premium program. Our customers that  
19 participate don't have to pay to be part of it. We  
20 actually provide them with a monetary benefit for  
21 participation.

22           And our executives approved this level of monetary  
23 benefit as, you know, a way to make sure that we could meet  
24 the net benefit criteria, but not necessarily charge our  
25 other customers, who aren't participating, with more and

1 more of a significant cost to them because we're providing  
2 that benefit to these participating customers.

3           Also, point out that this is a guaranteed benefit  
4 for 20 years. And, in comparison to the estimated benefit  
5 of the -- that is used for the cost effectiveness in the  
6 Energy Commission's analysis, we don't know for sure that  
7 that benefit will persist over time for all of the  
8 customers that have rooftop solar.

9 Just to use a personal anecdote, I, earlier this year, was  
10 doing a project for work and used some of my Green Button  
11 data from PG&E, and realized that my inverter had not been  
12 working for three months. And so, I wasn't getting that  
13 benefit. And those GHG reductions weren't occurring  
14 because my system failed. And even though I am an energy  
15 nerd, I didn't monitor it well enough to realize that.

16           Something similar happened to a neighbor of mine.  
17 Her inverter failed and she didn't realize it for 9 months  
18 until she got the \$400 true-up bill from PG&E. And she's a  
19 little, old lady living on fixed income. She came to me,  
20 complaining about her PG&E bill.

21           So, those benefits aren't guaranteed. We do expect  
22 our customers that do include rooftop solar will generally  
23 see benefits, and that's fine. But our benefits are  
24 guaranteed.

25           CHAIR HOCHSCHILD: Well, I guess where I am with

1 it, just to step back, you know, as an agency we are  
2 absolutely committed to getting to a hundred percent clean  
3 energy future. That is our focus on everything we're  
4 doing. It's our focus with our codes. It's our focus with  
5 our R&D. It's our focus with our enforcement. It's our  
6 focus with our clean transportation program.

7           And there's a second part of that to come which is,  
8 actually, the electrification of almost everything. That's  
9 where I believe we need to go. In transportation, we're  
10 adding 20,000 electric vehicles a month to roads in  
11 California. We're at 655,000, now. You know, we're seeing  
12 this transition with all-electric construction, even  
13 conversion of rail, like the Caltrans line, from diesel to  
14 electric.

15           We're going to need a lot more solar, a lot more  
16 clean electricity going forward, and that includes rooftop  
17 solar, it includes community solar, it includes utility  
18 scale solar, and it includes a whole bunch of new resources  
19 like we hope, for example offshore wind. So, this is, you  
20 know, the direction we're going.

21           My concern with this proposal, honestly, had to do  
22 with the value the customer's getting. I do feel that is  
23 low. You know, having said that, I feel this is kind of on  
24 us because we didn't specify, you know, with great  
25 specificity what the community solar project actually looks

1 like.

2 I do think it's important that there do be a  
3 community solar option. And we have built into, in  
4 addition to that, other common sense offramps including,  
5 you know, if the home is shaded, or if it's north facing,  
6 and so forth.

7 But to, you know, remember the context there, there  
8 was enormous blow back, by the way, when we did the solar -  
9 - in fact, the Legislature, this year, voted to undue the  
10 solar requirement in areas, you know, that were affected by  
11 the fire. Which is not a decision, by the way, I agree  
12 with. Actually, that's actually where you want the  
13 resilience. And, you know, when we adopt these codes, we  
14 only can adopt it, we only can adopt it if it saves the  
15 customer money. We actually don't ever adopt an energy  
16 code that doesn't save the customer money. And that, I  
17 felt that point really got lost in the discussion at the  
18 Legislature, but that is the context.

19 And so, you know, from my perspective, flexibility  
20 is an important feature and community solar is an important  
21 feature of that flexibility. But, you know, having said  
22 that I do -- that's my reaction to the -- I mean, I do  
23 think the value is low.

24 And so, I mean, Commissioner McAllister, you're  
25 lead on this item so --



1 COMMISSIONER MCALLISTER: Yeah.

2 CHAIR HOCHSCHILD: -- is there a recommendation you  
3 want to make?

4 COMMISSIONER MCALLISTER: Yes, so I want to thank  
5 the positive engagement on everybody's part, really great.  
6 And I would reiterate that we did get a lot of blow back  
7 from the requirement. I mean, not just from, you know, the  
8 usual suspects, all from the media, but on one extreme of  
9 the media. But, you know, within the Legislature it  
10 sparked a big discussion about, you know, how flexible this  
11 ought to be going forward. And they reacted as the Chair  
12 said.

13 So, I also wanted to point out that, you know,  
14 there actually is some information for us to discern what  
15 the minimum expected customer benefit is. We also, in the  
16 code, we created an opt out, which we have a proposal now,  
17 it's not on this Business Meeting, but it will be on a  
18 future Business Meeting sometime, from a public utility  
19 district that says that the solar, rooftop solar is not  
20 cost effective in their territory. And so, we're having to  
21 evaluate that to see whether our statewide average  
22 assessment, you know, really applies in that particular  
23 area of the state, in that particular service territory.

24 And so, you know, they're arguing that rooftop  
25 solar is not cost effective for their customers given that

1 they have federally subsidized rates or they have, you  
2 know, historically low rates that will likely continue in  
3 the future. And so, we're having to say, look, if it costs  
4 the customer more, then absolutely we would be giving them  
5 an exception to the rooftop mandate.

6 And so, implicitly, then, the minimum customer  
7 benefit, you know, at a reasonably granular level I would  
8 hope, would be zero. And this is more than zero. So,  
9 obviously, SMUD has cost effective opportunities for solar  
10 right now.

11 And, you know, my intent all along here was to not  
12 be the current from for the NEM, for the net energy  
13 metering debate, but it looks like it's sort of evolved  
14 into that.

15 You know, net energy metering is a separate topic  
16 and it's very complex, and it's fraught. And so, that's  
17 the implicit, you know, benefit that the customer -- that  
18 is the actual benefit that the customer is getting,  
19 depending on what NEM is in a particular service territory.  
20 So, in this case SMUD.

21 So, did you want to say something else or?

22 COMMISSIONER MONAHAN: Well, I have a question.

23 COMMISSIONER MCALLISTER: Yeah, absolutely.

24 COMMISSIONER MONAHAN: And I think it's actually  
25 for you, Commissioner McAllister.

1 COMMISSIONER MCALLISTER: Uh-oh.

2 COMMISSIONER MONAHAN: Or perhaps us, as well. But  
3 I'm kind of fixated on this issue that multi-family  
4 dwellings --

5 COMMISSIONER MCALLISTER: Yeah.

6 COMMISSIONER MONAHAN: -- and it's a problem,  
7 right, because the owner of a multi-family dwelling doesn't  
8 necessarily have an incentive to pass on the savings.

9 COMMISSIONER MCALLISTER: That's right.

10 COMMISSIONER MONAHAN: You know, to spend more for  
11 a mortgage so that the utility bill of the people in the  
12 building will go down. I mean, that's a big problem.

13 And it seems that this -- by using this, you know,  
14 cost effectiveness as our criteria, we could exacerbate  
15 that. Or, maybe not exacerbate, but we're not helping it.

16 COMMISSIONER MCALLISTER: We're not helping as  
17 much, yeah.

18 COMMISSIONER MONAHAN: And the question is, I mean,  
19 can we -- is this a place where we should be engaging the  
20 Disadvantaged Communities Advisory Group? Should we be  
21 really mining this around how can we make sure that our  
22 regulations support benefits accruing to everyone, and  
23 especially folks living in apartment buildings that are  
24 often low income.

25 COMMISSIONER MCALLISTER: So, staff feel free to

1 comment. I guess, you know, again, I think Title 24, you  
2 know, Building Energy Efficiency Standards are a place  
3 where we have authority to do certain things, but in a lot  
4 of places it's going to be silent.

5 I would imagine, for example, on that point it's  
6 probably silent and maybe legal can back me up on that.

7 MR. CHALMERS: So, I'm not aware of any particular  
8 provisions in the 2019 edition of our Building Code where  
9 we specifically drill into disadvantaged communities.

10 COMMISSIONER MCALLISTER: Yeah, I think where I  
11 would say that's a valid conversation is in the  
12 presentation from SMUD, of whoever's applying for the  
13 community solar option in the future, talking about how to  
14 apply virtual net metering, how to have options that in  
15 this non-rooftop option, or whatever the options the  
16 utility's going to offer, how they can make sure the  
17 benefits accrue to different populations in a way that  
18 looks like a program that stakeholders would support, and  
19 that we would approve.

20 So, yeah, so I just have two more points. So, you  
21 know, I have to say I've been in this industry for 30 years  
22 almost, in the solar industry from the early -- dating from  
23 the early 1990s, when solar was a lot more expensive and,  
24 really, there wasn't any grid-connected solar in the U.S.  
25 And we've come a long way. And we've gotten huge cost

1 reductions, huge technology developments. We have, you  
2 know, power electronics that are -- just we could only  
3 imagine we were off in the middle of nowhere, in Altiplano,  
4 Bolivia, in my case, installing solar back in the day. You  
5 know, we have actual, really quality equipment that lasts.  
6 And that's, really, I think kudos to everybody in this room  
7 and beyond, in the solar industry. It's amazing, really,  
8 the opportunities that we have.

9 I'm skeptical that a proposal such as this is going  
10 to completely undermine the rooftop solar argument. And I  
11 don't think the sky is going to fall with a community  
12 solar option. But, you know, I think we're also in a  
13 position to see how things go forward and see if that  
14 happens. And then, how the various subsectors, you know,  
15 segments of the solar marketplace evolve.

16 I have two concerns, really, and I've talked about  
17 both of them. I have two concerns that are going to, I  
18 think, need further discussion. One is, certainly, if  
19 we're endangering grid flexibility, that is a --  
20 decarbonization depends on grid flexibility. And if we're  
21 undermining, in any way, new construction's ability to have  
22 technologies onsite that encourage good behavior by that  
23 particular building on the grid, then that's a problem for  
24 me. And it's certainly the intent of the standards was to  
25 encourage that to happen, in at least a voluntary way.

1           As Commissioner Douglas said, we couldn't find  
2 behind-the-meter batteries to be cost effective, but we  
3 could encourage them and we think that that's actually  
4 going to happen in 2020 and beyond.

5           And then, the second, you know, I'm not sure  
6 there's a solution and I'm not sure we have to solve this  
7 problem. And I think we have considerable discretion,  
8 which we need to use wisely. But this definition of  
9 community, I think we need to consider, perhaps, putting in  
10 place some limits on what that actually means and where  
11 these attributable sites are going to be.

12           I don't have a problem with it being a preexisting  
13 site because I know that's going to get made up over in  
14 some RPS compliant future facility, and I think that's just  
15 accounting and that's no problem.

16           But I do think that there was a spirit discussion,  
17 when we were working on the rulemaking that, you know,  
18 community solar meant a lot of different things to a lot of  
19 different people, but that probably it wasn't, you know,  
20 utility scale in the desert. It probably wasn't near,  
21 maybe infill, something like that.

22           So, I think maybe we end up in the same place we are  
23 now. I'm not going to prejudge that discussion. But those  
24 are the two issues that I think need further discussion.

25           And I'm going to propose that we pull this item for

1 this meeting, and that we sharpen up our pencils a little  
2 bit and come back with an offering that is slightly  
3 modified. Certainly, that give the kinds of guarantees  
4 that I'm talking about on the flexibility front. And then,  
5 see if we can do a little bit better and be more precise on  
6 the community solar definition.

7 CHAIR HOCHSCHILD: Okay.

8 MR. HAMZAWI: Commissioner McAllister -- oh, sorry,  
9 excuse me.

10 CHAIR HOCHSCHILD: Yeah, go ahead.

11 MR. HAMZAWI: I just want to point out that we had  
12 discussions on this with staff and debated about what  
13 resources we would include in our application. And with  
14 the exception of one system, the rest of all of our systems  
15 are inside our county. So, I think we have really met the  
16 spirit and intent of it in our building systems that are in  
17 our service territory.

18 COMMISSIONER MCALLISTER: I very much appreciate  
19 that. And I agree with you. I think that as a precedent,  
20 I think probably we need to have that conversation to make  
21 it more explicit. And so, not to impugn the work that was  
22 done already on this.

23 MR. TUTT: And, Commissioner McAllister, if I may,  
24 I'd also like to point out that many of our resources that  
25 we've allocated to the portfolio here are relatively small

1 resources. Our feed-in tariff projects are not one big,  
2 100-megawatt facility located somewhere. They're spread  
3 out through our service territory. And I think the  
4 smallest one is just 400 kW. There are several that are 1  
5 megawatt facilities. There are several that are, you know,  
6 2 megawatt facilities or 3. And I think the largest sort  
7 of single facility in that program is a 5 megawatt. Some  
8 of them are close together but, certainly, we have some  
9 smaller facilities included in the program.

10 Those resources, obviously, have been existing for  
11 a long time, so we're hoping to move to new resources. And  
12 our new resource in Natomas provides grid voltage support,  
13 and is 13 megawatts. It's not a huge utility scale system.  
14 Thank you.

15 COMMISSIONER MCALLISTER: Yeah, and thanks a lot.  
16 And in discussions going forward, I would just really,  
17 strongly recommend that folks get out of their own kind of  
18 comfort zone a little bit, and figure out what -- look at  
19 the State of California's goals more broadly, maybe, than  
20 your particular day job, and try to figure out what really  
21 makes sense and what's the right thing to do. Because I  
22 think there was a lot of sort of litigation position here  
23 today, in people's comments. But let's roll up our sleeves  
24 and be looking for solutions that really let all the  
25 flowers bloom, and not just the ones in any one particular



1 parcel.

2 CHAIR HOCHSCHILD: Okay, colleagues, if that's  
3 amenable to everybody, we'll table this item and you'll  
4 bring it back when you're ready.

5 With that, we are going to take a break for lunch.  
6 Item 6 took 2 hours and 45 minutes.

7 COMMISSIONER DOUGLAS: We should vote on that.

8 If I could, let me just ask the Chief Counsel,  
9 should we vote on that?

10 MS. HOUCK: Once you make a motion to table --

11 CHAIR HOCHSCHILD: Okay, why don't you make a  
12 motion to that effect?

13 COMMISSIONER MCALLISTER: Okay. I make a motion to  
14 pull Item 6.

15 CHAIR HOCHSCHILD: Okay, is there a second?

16 COMMISSIONER DOUGLAS: Second.

17 CHAIR HOCHSCHILD: All in favor say aye.

18 (Ayes)

19 CHAIR HOCHSCHILD: All right, that passes  
20 unanimously.

21 Let's reconvene at 2:45. I have to go and then  
22 Commissioner Scott will take it over.

23 (Off the record at 2:18 p.m.)

24 (On the record at 2:52 p.m.)

25 VICE CHAIR SCOTT: Welcome back, everybody. We are

192

1 now on Item Number 7, the Load Management Rulemaking,  
2 Docket Number 19-OIR-01.

3 Karen, please go ahead.

4 MS. HERTER: It's my first time. Thank you.

5 Good afternoon, Commissioners. My name is Karen  
6 Herter and I'm an Energy Commission Specialist 3 in the  
7 Efficiency Division.

8 I'm here today to propose an order instituting  
9 rulemaking to update the existing regulations for the  
10 Energy Commission's load management standards authorized  
11 under the Warren-Alquist Act. Last year Senate Bill 100  
12 committed the state of California to a carbon free  
13 electricity supply by 2045. Reaching this goal will  
14 require the replacement of fossil fuel generation with  
15 clean energy resources.

16 Solar technologies are expected to comprise the  
17 largest share of future carbon free energy supplies in  
18 California. Because the availability is limited by  
19 sunrise, sunset, and cloud cover, a high concentration of  
20 solar resources will exacerbate the challenge of balancing  
21 the grid in real time.

22 Given the inflexibility of this energy supply,  
23 economic principals would advocate improving the efficiency  
24 of future electricity markets by increasing flexibility in  
25 the demand side. Recent state legislation including

1 Assembly Bill 3232 and Senate Bill 49 has called on the  
2 Energy Commission to consider opportunities and create new  
3 regulations to do just that. The CEC originally 1982 load  
4 management standards increased demand flexibility by  
5 compelling the creation of residential load control  
6 programs, marginal cost pricing, and large commercial and  
7 industrial time of use rates.

8 As a result, California customers in all sectors  
9 have been providing basic load shifting and demand response  
10 resources for decades. During that time, however,  
11 technologies and markets have evolved dramatically and the  
12 need for more advanced demand flexibility has become  
13 increasingly evident. This order would direct CEC staff to  
14 work with the public, stakeholders, and sister agencies to  
15 consider amending the existing load management regulations  
16 with the goal of increasing statewide demand flexibility  
17 and leading the state to a 100 percent clean energy future.

18 Thank you for your time, and I'm happy to take any  
19 questions.

20 VICE CHAIR SCOTT: Thank you. I have one public  
21 comment here in the room. Mr. Steve Uhler, please.  
22 Perhaps he's not here in the room.

23 The Public Advisor has just noted that he did not  
24 leave comments for her to read.

25 Do I have any public comments on the phone? All

1 right. With that, comment on Item 7 is closed.

2 Let us turn to Commissioner comments, please.

3 COMMISSIONER MCALLISTER: Hey, thank you. So this  
4 is the item I was referring to earlier when we were talking  
5 about Charlie Warren and his legacy. And the load  
6 management standards parts of the Warren-Alquist Act are  
7 just amazingly prescient and they could have been written  
8 maybe not quite yesterday but maybe, you know, six months  
9 ago or something. But they are as relevant now as they  
10 ever were. And our authority in this area is clear and the  
11 conversation that we're going to have that's laid out in  
12 this item is in broad strokes and will soon be enjoined by  
13 a more detailed document is essential for us to get where  
14 we need to go.

15 And so, you know, I said earlier in the previous  
16 item that load flexibility is essential for decarbonization  
17 and this is where a lot of that rubber hits the road in a  
18 conversation about load management. So I'm really excited  
19 to be bringing this -- that staff has brought this forward  
20 and thank Karen for all her hard work on it and both up to  
21 now and this past week to come. And it's going to be a  
22 really good, useful I think, very productive positive  
23 discussion for California. It's going to take us in the  
24 direction we need to go and marshaling all the technology  
25 and know-how that we have in this state. So I'm very

195

1 excited to support this item.

2 COMMISSIONER DOUGLAS: So I'll just say in addition  
3 that we have talked from time to time about dusting off  
4 this authority and bringing it forward and it always seemed  
5 important and now it seems essential. And so I'm really  
6 glad you're taking this on.

7 COMMISSIONER MCALLISTER: Great. Thanks a lot.  
8 And welcome back, Karen, who's our Lead on this who worked  
9 at the Commission with our resident help the last time we  
10 were working on load management standards and Jackie  
11 Pfannenstiel. So it's I think really time to engage on  
12 this again, so.

13 COMMISSIONER MONAHAN: Can I just say one quick  
14 thing which is that this dovetails nicely, too, with the  
15 vehicle grid integration work that the Fuels and  
16 Transportation Division will be publishing next year.

17 COMMISSIONER MCALLISTER: Great.

18 COMMISSIONER MONAHAN: And it's an opportunity to  
19 leverage -- make sure that as we're electrifying  
20 transportation, we're doing it in a way that supports the  
21 grid.

22 COMMISSIONER MCALLISTER: Absolutely. It's all of  
23 that is related in flexibility.

24 So I move Item 7.

25 COMMISSIONER DOUGLAS: Second.

1 VICE CHAIR SCOTT: All right, all those in favor?  
2 (Ayes.)

3 VICE CHAIR SCOTT: With that, the motion carries 4-  
4 0.

5 Now we'll move on to Item Number 8, Variable  
6 Capacity Heat Pump (VCHP) Performance Compliance Option.  
7 Jeff, please.

8 MR. MILLER: Good afternoon, Commissioners. My  
9 name is Jeff Miller. I'm a Mechanical Engineer in the  
10 Building Standards Office. I'm here to ask for your  
11 approval of Variable Capacity Heat Pump performance  
12 compliance option.

13 Compliance with the California Energy Code may  
14 utilize a computer model approved by the Energy Commission  
15 to simulate the energy use of a building based on user  
16 inputs that describe the properties of the building which  
17 includes the operational efficiency of heating and cooling  
18 systems contained in the building.

19 Modeling of the operational efficiency of new  
20 technologies may be approved and incorporated into the  
21 compliance software by use of a compliance option.  
22 Variable Capacity Heat Pumps, also referred to as mini-  
23 splits and VCHP systems, are an emerging heating and  
24 cooling technology in California and the rest of North  
25 America even though they are common in many other parts of

197

1 the world. VCHPs do not currently receive performance  
2 credit within the Energy Commission's compliance modeling  
3 software due to uncertainty regarding their installed  
4 performance. To address VCHP manufacturers' request for a  
5 performance credit for VCHP systems, VCHPs have been  
6 studied in the Central Valley Research Homes Project also  
7 known as CVRH, a multiyear effort to test residential  
8 energy efficiency measures and technologies in four  
9 unoccupied, highly instrumented homes of different vintages  
10 in Stockton, California.

11           The data generated by this study was used to  
12 develop VCHP compliance credit. Staff's proposal would add  
13 this credit into the Title 24 Performance Compliance  
14 Software. Staff presented the proposal and accompanying  
15 software at a public workshop on February 15th, 2019.  
16 Commission staff then prepared a report that clarifies  
17 eligibility requirements and provides support materials  
18 such as new compliance documents and field verification  
19 procedures that will be necessary for implementing the  
20 proposed compliance option. The report was made available  
21 for public comment and staff received detailed comments  
22 from 23 stakeholders.

23           Staff has reviewed all stakeholders comments posted  
24 to the docket and has responded to all comments received  
25 prior to November 5th, 2019. Staff finds that the proposed

1 compliance option is justified by the CVRH research. Staff  
2 therefore requests your approval to incorporate these VCHP  
3 algorithms into the residential performance compliance  
4 software known as CBECC-Res for use for demonstrating  
5 compliance with the residential performance standards.  
6 Staff also requests that field verification procedures  
7 detailed in the staff report be approved as well.

8 Thank you, and I'm available to answer any  
9 questions you may have.

10 VICE CHAIR SCOTT: Thank you. I have a public  
11 comment from Steve Uhler, please.

12 MR. UHLER: Thank you, Commissioners, I'm Steve  
13 Uhler. In looking at the methods that were used to arrive  
14 at this, I'm not finding very much science.

15 Also, I'm noting that there are words in there that  
16 look like rules that are being written. And just like I  
17 said for the like SMUD stuff, the health and safety code  
18 requires you to follow the APA. Algorithms are rules. Now  
19 I was unable to find a rule that was gone through the APA  
20 that you would be allowing them to put into the software.

21 Again, this is Chapter 2 related stuff not actually  
22 having a NOPA. And if you look on the card, there's  
23 expressed terms, ET, all of those ISOR and all that other  
24 stuff, I have no idea of what this construction will be but  
25 this seems is proposing things like having to hang



1 thermostats on the wall on a system that has been cleverly  
2 designed to not need that. It also seems to not take into  
3 account efficiencies that could be resilience oriented such  
4 as the ability to actually directly use DC because by  
5 nature inverter-based systems can take in DC.

6 I think you should consider tabling this or  
7 definitely not going forward on this until these rules are  
8 made related to this. If you've read what I've put in the  
9 docket, Berkeley seems to think these devices are very,  
10 very efficient. I agree with that very much. The ability  
11 to tune itself in real time to what's necessary will do  
12 things like minimize restart loads as opposed to a single  
13 speed air conditioning system.

14 I find that you have no justification in allowing  
15 them to write algorithms from rules that haven't gone  
16 through the APA. Do you understand what the  
17 requirements of the APA are and the Health and Safety Code  
18 in following that? Are the Commissioners familiar with the  
19 APA? This is an item you'll be taking action on.

20 And Bagley-Keene would -- I would like for the  
21 record if you don't respond that you didn't respond. It  
22 would -- yes or no, do you understand the APA?

23 COMMISSIONER MCALLISTER: This is a comment period,  
24 so please finish up your comment.

25 MR. UHLER: But within the Bagley-Keene, if

1 somebody requests to know whether or not or if you do not  
2 answer a question, and you should know and you withhold  
3 that information, you'll be in violation. And it's -- look  
4 for the word "misdemeanor" within the code.

5 VICE CHAIR SCOTT: So you at time. I would like to  
6 ask for our Public Advisor and perhaps our Chief Counsel to  
7 follow up with you offline.

8 Do I have any other public comment in the room?  
9 Excuse me, public comment on the phone?

10 Okay. With that, our comment on Item 8 is closed.  
11 Let me turn to Commissioner discussion.

12 COMMISSIONER MCALLISTER: Thanks for that item,  
13 appreciate that, Jeff.

14 Let's see, maybe I guess you or Peter just very  
15 briefly, I know we've been at this a long time today, a  
16 little bit of context for this item in terms of all the  
17 comment that was received. Obviously positively  
18 predisposed, we've gotten a lot of activity in the docket  
19 on this and I just want to sort of maybe give that a little  
20 flavor to people.

21 MR. STRAIT: Would you prefer that I handle that or  
22 would you like to?

23 MR. MILLER: If you would like to, Peter, I'm okay  
24 with that.

25 MR. STRAIT: Certainly. So the comments that we

1 got for the most part were asking that we go farther. So  
2 the Central Valley Research Home results were actually a  
3 little bit of a surprise to us. We were expecting to see  
4 that the performance of these systems would track more  
5 closely with their rated values and it didn't which is the  
6 reason why the credit being proposed is a flat credit that  
7 is guaranteed to be applicable in 90 percent of cases.

8 Most of the stakeholders would have preferred a  
9 larger credit that did track with that performance. They  
10 also had some requests, one which was interesting was  
11 related to the thermostat on the wall requirement. That  
12 requirement exists because that's required of all other  
13 systems installed under code, but we could certainly in the  
14 future look at whether that is a requirement that should  
15 remain applied to these systems. So we didn't want to  
16 change that requirement as a part of this proceeding since  
17 this is just about the software algorithms and when it  
18 awards credit for the efficiency these have.

19 COMMISSIONER MCALLISTER: So there was kind of a  
20 short fuse on this to get something up, right?

21 MR. STRAIT: Yes, exactly. So there was a lot of  
22 consensus that this is a good first step. And as long as  
23 we remain committed to continuing to work with stakeholders  
24 in the future compliance options and future rulemakings,  
25 they said this first step is good, we want better and we

1 want best but they are support of it for now.

2 We did have one commentary that was kind of against  
3 that, they did not want this at all. And they took an  
4 everything in the kitchen sink approach to why we should  
5 not do this item today. The alternative to not doing this  
6 would simply be to ignore the efficiency of these systems  
7 do bring and not award any credit to them whatsoever.

8 Staff did respond extensively to those comments on  
9 the record. We didn't find there was anything in there  
10 that was persuasive that would change Staff's  
11 recommendation or change the basic credit being proposed  
12 today.

13 COMMISSIONER MCALLISTER: Okay. Great. So thanks.  
14 I guess just with that August rejoinder, we're still going  
15 to be working on this, we're going to get better and we  
16 just --

17 MR. STRAIT: Absolutely.

18 COMMISSIONER MCALLISTER: -- not perfect yet but  
19 we're going to try to get more close to perfect going  
20 forward in future generations.

21 MR. STRAIT: Yeah. This is all an iterative  
22 process, this is one iteration of our software modeling and  
23 we plan to continue to work with stakeholders to improve it  
24 further.

25 COMMISSIONER MCALLISTER: Great. Thanks a lot.

1           Jeff?

2           MR. MILLER: So I should add, this technology  
3 really deserves a do method of test which is what we have  
4 in development. Canadian standards is working on that but  
5 we don't have one available to rate these systems properly.  
6 So what we put in place with this compliance option  
7 provides a credit that we believe is defensible based on  
8 the research we've done. And so, it's --

9           MR. STRAIT: Yeah. That's actually a good way to  
10 characterize it. This is in a certain sense a bridge  
11 measure, a way in the development of the standard that will  
12 track more closely with the performance.

13           COMMISSIONER MCALLISTER: Okay. Yeah. I mean,  
14 this is a very good technology to include buildings going  
15 forward and I just want to make sure we're being as  
16 aggressive as we can be and still be responsible for the  
17 science.

18           So, anyway, thanks for your presentation. I'm  
19 support of this item. And I will move Item 8 -- no, is  
20 that it? No, sorry, yes, 8. Sorry, move Item 8.

21           COMMISSIONER MONAHAN: I'll second that.

22           VICE CHAIR SCOTT: All right. All those in favor.

23           (Ayes.)

24           VICE CHAIR SCOTT: With that, the motion carries 4-  
25 0.

1           Next we will move on to Item 9, the Energy  
2 Conservation Assistance Act (ECAA) Rulemaking, Docket  
3 Number 18-OIR-02.

4           Hally, please.

5           MS. CAHSSAI: Good afternoon, Commissioners. My  
6 name is Hally Cahssai. I'm with the Efficiency Division.  
7 And with me is Cory Irish from the Chief Counsel's Office.

8           I'm here today to request adoption of resolution to  
9 repeal the Energy Conservation Assistance Act or ECAA  
10 regulations which are outdated and no longer relevant to  
11 administrating the ECAA program.

12           The ECAA program is a low interest and no interest  
13 loan program administered by the Energy Commission to  
14 provide loans to local government and public schools to  
15 fund energy efficiency and renewable energy projects. The  
16 program has been in existence for 30 years and has funded  
17 882 projects. Currently there are \$165 million used for  
18 implementation for these projects and the funds are being  
19 repaid.

20           The program has resulted in local governments and  
21 public schools savings over \$45 million in annual energy  
22 costs and a reduction of over 125,000 metric tons of CO2  
23 per year. The program has also had a very successful  
24 repayment history with zero loan defaults and 100 percent  
25 of borrowed funds repaid.

1           The ECAA program was established in 1979 and ECAA  
2 regulations were adopted in 1983. Since 1979, the ECAA  
3 statutes has been revised and updated numerous times as the  
4 ECAA program as evolved. Most recently, Senate Bill 110 in  
5 2017 made further changes to the way the ECAA program is  
6 implemented. However, the 1983 ECAA regulations have never  
7 been revised and have not kept up with changes in statute.

8           Each section of the current regulations have now  
9 become either out of date, no longer relevant, or  
10 unnecessary for the administration of the program.  
11 Therefore, staff is proposing to repeal the ECAA  
12 regulations and use statutory authority and guidance to  
13 implement the program. Repealing the ECAA regulations will  
14 not affect how the ECAA program is currently implemented,  
15 nor will impact the time or resources needed to apply for a  
16 loan.

17           In addition, in compliance with the Administrative  
18 Procedures Act, staff held a 45-day comment period followed  
19 by public hearing. There were no comments received during  
20 the 45-day comment period. During the public hearing, we  
21 had one individual ask if the loans would be available for  
22 local governments and schools and we were able to confirm  
23 that the program will continue as it has been as that  
24 information was part of the staff's presentation during the  
25 public hearing.

1           Staff has considered the application of the  
2 California Environmental Quality Act, or CEQA, to the  
3 proposed repeal and concluded that proposed repeal is  
4 exempt from CEQA because the proposed repeal will not  
5 affect how the ECAA program is implemented and therefore,  
6 it can be seen with certainty that there is no possibility  
7 the proposed repeal will have a significant effect on the  
8 environment.

9           Staff requests that the Commission adopt the  
10 resolution to repeal the outdated ECAA regulations which as  
11 stated previously will not impact how the program is run or  
12 nor the time or resources needed to apply for a loan.

13           Cory and I are available to answer any questions  
14 you may have. Thank you.

15           VICE CHAIR SCOTT: Thank you. Let me see if I have  
16 any public comment in the room. All right. How about any  
17 public comment on the phone?

18           Okay. With that, we'll close public comment on  
19 Item 9. Let me turn to Commissioner discussion.

20           Commissioner McAllister.

21           COMMISSIONER MCALLISTER: Yes. This is pretty  
22 straightforward. You know, old rules that don't really  
23 need to be there and it's really just a good government  
24 thing. And, you know, even -- even the agencies that you  
25 might expect to be like what? They're repealing rules?



1 It's kind of been a big nothing burger.

2 So the ECAA program is so well run and has its own  
3 guidelines that really staff follow and we see that every  
4 meeting when we get stuff in front of us from -- through  
5 that program. So it's really self-sufficient on its own  
6 without these rules, without these regs. So very  
7 appropriate to clean things up and get rid of them.

8 So if there are no other comments, I'll move Item  
9 9.

10 COMMISSIONER MONAHAN: Second.

11 VICE CHAIR SCOTT: All right. All those in favor.

12 (Ayes.)

13 VICE CHAIR SCOTT: With that, the motion carries 4-  
14 0.

15 We will now move on to Item Number 10 which is --  
16 oops, Determination of Consistency of Integrated Resource  
17 Plans, IRP, with SB 350.

18 That's going to be Paul.

19 MR. DEEVER: Good afternoon, Commissioners. My  
20 name is Paul Deaver. I am the Program Manager for Publicly  
21 Owned Utility Integrated Resource Plans or POU IRPs.

22 Today I'm going to present reviews of POU -- for  
23 four POU IRPs and for those adopting executive record of  
24 determinations found in each IRP consistent with  
25 requirements of Senate Bill 350, specifically Public

1 Utilities Code, Section 9621. I'll refer to this as SB 350  
2 throughout the presentation.

3 The four public utilities are Burbank Water and  
4 Power, Imperial Irrigation District, Redding Electric  
5 Utility, and Roseville Electric Utility. A brief outline  
6 of my talk today. First I'm going to give an update, a  
7 status update on POU IRP filings. I'm going to give a very  
8 quick review on the requirements for POU IRPs under SB 350,  
9 and I'll provide a review and summary of each POU and their  
10 IRP filing. Towards the end of the presentation, I'm going  
11 to request the Energy Commission adopt the determinations  
12 finding each IRP consistent with the requirements of SB  
13 350.

14 To date, all 16 POU's that are required to file IRPs  
15 have done so. Six executive record of determinations have  
16 been adopted and staff expects to present POU IRPs in  
17 December and one in early 2020.

18 First thing I'm going to provide a review of the  
19 POU IRP requirements under SB 350. You've all seen this  
20 before, it's a review I'll go through quickly. The 16  
21 largest POU's must adopt an IRP by January 1st of 2019 and  
22 submit it to the Energy Commission along with supporting  
23 information reporting tables. The Energy Commission  
24 reviews the IRPs and determinations if they're consistent  
25 with SB 350.

1           For the requirements, POU's have a few mandates  
2 they must meet. First are the California Air Resource  
3 Board establish greenhouse gas reduction targets by 2030.  
4 Also the POU's must ensure procurement of at least 50  
5 percent of renewable energy by 2030. Senate Bill 100 which  
6 became law January 1st of this year requires a 60 percent  
7 RPS rather than the 50 percent. This was after many of the  
8 POU's submitted their IRPs to the Energy Commission thus  
9 Energy Commission be revealing for a 50 percent RPS.

10           Besides these two mandates, POU's also must address  
11 and plan for procurement for preferred resources. Although  
12 the Energy Commission is reviewing for 50 percent RPS,  
13 almost half of the POU's that submitted IRPs plan for 60  
14 percent or more RPS by 2030.

15           I'll start out with Burbank Water and Power or  
16 Burbank. I believe we have a representative from Burbank  
17 participating via WebEx today. Burbank is the 13th largest  
18 POU in California. They are not for profit electric and  
19 water utility in Los Angeles County. Burbank serves  
20 primarily residential and commercial customers. They have  
21 very little heavy industrial load. Because of this, they  
22 have a relatively peaky demand and they have ramping  
23 challenges. Their annual peak demand is around 300  
24 megawatts.

25           Burbank submitted its IRP to the Energy Commission

1 in April of this year. Energy Commission staff reviewed  
2 the IRP filing and the materials with it and determined  
3 that it does meet the requirements of SB 350.

4 Burbank's annual energy demand is around 1,000  
5 gigawatt hours of before cast the demand to remain  
6 relatively flat over the planning period. We found that  
7 their energy demand forecast is comparable to the Energy  
8 Commission's mid and low demand forecast. We do see that  
9 their demand forecast is closer to the Energy Commission's  
10 low forecast, to the low energy forecast. This is likely  
11 because of energy efficiency programs pushing demand down.

12 Some of Burbank's current resources. Currently  
13 they have coal, nuclear, natural gas as well as large and  
14 small hydroelectric. For the renewables, they have solar  
15 wind, biomass, and geothermal resources. Currently coal  
16 and natural gas make up the majorities of Burbank's  
17 resource mix.

18 So Burbank stops receiving coal energy in 2025 and  
19 they exit from their intermountain power plant contractor  
20 IPP by 2027. To replace some of the energy and capacity  
21 from the IPP contract the utility plans to replace that  
22 with renewable energy and storage to integrate the  
23 renewables. The renewables include primarily wind and  
24 solar.

25 For their RP -- IRP requirements for their GHG

1 targets, Burbank plans to reduce its greenhouse gas  
2 emissions down to 73,000 metric tons by 2030. This is  
3 under CARB's target. To meet these targets -- to meet this  
4 target, Burbank plans to exit from its coal -- from coal  
5 energy and from the IPP contract, it reduces output from  
6 its natural gas plants or natural gas resources and it  
7 procures additional renewable resources to make up for it.

8           For the RPS requirements, Burbank plans to exceed  
9 the 50 percent RPS requirement and by 2030, they intend to  
10 have over 70 percent of their retail sales met by renewable  
11 energy. Burbank plans to procure solar energy and wind to  
12 meet its IRP requirement. They also plan on procuring  
13 various storage resources to help integrate the renewables.  
14 For the rest of their current renewables such as small  
15 hydro geothermal and biomass, those remain relatively  
16 constant over the panning period.

17           Some highlights from staff's review for Burbank.  
18 I'll talk a little bit about energy efficiency. Burbank  
19 plans to expand its energy -- its current energy efficiency  
20 programs. Some of these programs include residential AC  
21 tune-ups and replacement, residential time of use rates  
22 which will go into effect by 2020. Home management reports  
23 to help change behavior and also direct equipment installs  
24 for energy efficient appliances.

25           Once again, from staff's review of the IRP, the

1 reporting cables and supporting information, we found that  
2 Burbank's IRP meets all the requirements of Senate Bill  
3 350.

4           Next up is Imperial Irrigation District or  
5 Imperial. I believe we were supposed to have a  
6 representative from Imperial attending in person today.  
7 Oh, we do. Thank you.

8           Imperial is the third largest POU in California and  
9 the fourth largest balancing authority in California.  
10 They're a vertically integrated city owned not for profit  
11 electric and water utility in Imperial County. They are  
12 primarily residential customers, that's their base. They  
13 constitute over 80 percent of their total customers.  
14 Although commercial and industrial consume almost 40  
15 percent of their total load.

16           Their annual peak demands around 1,000 megawatts.  
17 Imperial submitted their IRP to the Energy Commission in  
18 April of 2019. Energy Commission staff reviewed the IRP  
19 and supporting information and found that it did meet the  
20 requirements of SB 350.

21           Imperial's current demand is almost 4,000 gigawatt  
22 hours. They do project a small increase in demand over the  
23 panning period, about a 1 percent increase per year. We  
24 also found that their demand increase is comparable and  
25 similar to the Energy Commission's mid demand forecast.

1           For Imperial's current resource mix, primarily  
2 consists of natural gas units. Most of these were built in  
3 the 1970s. They also have large hydroelectric nuclear and  
4 renewable resources. For the renewables they have  
5 primarily solar and biomass right now as well as geothermal  
6 and small hydro. Most of Imperial's renewable resources  
7 are contracts except for one small hydro plant and one  
8 solar resource.

9           For Imperial's -- for meeting their GHG targets,  
10 Imperial projects they'll reach or get their GHG emissions  
11 down to 899,000 electric tons by 2030. This is under  
12 CARB's targets. In order to meet these targets, Imperial  
13 plans a reduced output from its natural gas resources as  
14 well as procuring additional renewal resources.

15           For their RPS requirements, Imperial plans to meet  
16 a 50 percent RPS by 2030. In the near term, they procure  
17 some geothermal and solar resources around 2019/2020 for  
18 some near term leads. They also procure storage in 2021 to  
19 help integrate their renewables. And towards the end of  
20 their panning period, they plan on procuring some generic  
21 renewables which have no specific location or technology.  
22 These can include solar, wind, biomass, or geothermal.

23           For Imperial's procurement plan, they looked at  
24 different levels of potential base load and intermittent  
25 RPS resources. Currently, Imperial has mostly base load RPS

1 resources and they found that most cost effective for their  
2 strategy to procure more intermittent than base load to add  
3 diversity to their resource portfolio.

4 As I mentioned early, they plan on adding  
5 renewables by 2020 for air term needs as well as storage.  
6 And although Imperial maintains its natural gas capacity for  
7 liability reasons, they do reduce the output from their  
8 natural gas load over the planning period.

9 A few highlights from staff's review. I'll talk a  
10 little bit about energy storage. In 2016, Imperial  
11 installed a battery energy storage system. This is to help  
12 mitigate solar overage generation. And based on their  
13 experience with this recent resource, Imperial did find it  
14 cost effective to procure another battery storage system by  
15 2021.

16 Imperial is also considering pump storage as a  
17 candidate resource as pump storage can provide both key  
18 capacity and ancillary services.

19 A little bit about electric vehicle  
20 electrification. So to understand electric grid impacts,  
21 Imperial studied different charging habits for light duty  
22 electric vehicles. They're also considering time of use  
23 rate for electric vehicle charging and mitigates solar over  
24 generation. Along with light duty electric vehicles, the  
25 utility also studied medium and heavy duty electric



1 vehicles. Some of these include public transit buses,  
2 school buses, airport shuttles as well as freight trucks.  
3 They studied the medium and heavy duty vehicles to get a  
4 better understanding of grid impact from charging these  
5 types of vehicles.

6 From staff's review of the IRP, supporting  
7 information, and the reporting tables, we found that their  
8 IRP does meet the requirements of SB 350.

9 Next up is the Redding Electric Utility or Redding.  
10 First I want to recognize Julio Gutierrez for his efforts  
11 in reviewing the IRP. He is the staff lead for Redding's  
12 IRP. I believe we have representatives from Redding  
13 attending in person today.

14 Redding is the 16th largest POU in California.  
15 They're a vertically integrated city owned not for profit  
16 electric and water utility Shasta County. Most of  
17 Redding's customers are residential, over 80 percent. The  
18 rest are commercial, industrial, and other. Redding does  
19 have a wide variation and elevation in the service  
20 territory. Because of this, they do experience wide  
21 variations in their load. Their peak demand was right  
22 around 230 megawatts.

23 For submitting to the Energy Commission, they  
24 submitted their IRP in April of this year. The Energy  
25 Commission staff reviewed their IRP filings, supporting

1 information and found that it did meet the requirements of  
2 SB 350.

3 For their demand forecast, in 2019, they had just  
4 under 800 gigawatt hours. That's their forecast. This  
5 grows very slightly. They have a small, very small growth  
6 rate over the panning period. And staff did find that  
7 their demand forecast was similar and comparable to the  
8 Energy Commission's mid demand forecast.

9 A little bit about their current resource mix.  
10 Currently, Redding has both large and small hydroelectric,  
11 wind, and natural gas in some spot market purchases. Large  
12 hydroelectric and small market purchases make up the bulk  
13 of Redding's resource mix currently. And for renewables,  
14 Redding currently has mostly wind with some small  
15 hydroelectric resources.

16 For meeting the IRP requirements for the GHG  
17 targets, Redding does project that it will reduce its GHG  
18 emissions down to 64,000 metric tons by 2030. This is  
19 under CARB's range, it's actually towards the low end. To  
20 meet this target, Redding plans to transition away from the  
21 spot market and to procure additional renewable resources  
22 to meet load.

23 For the RPS requirement, Redding starts procuring  
24 solar resources by 2021 and by 2030, they intend to reach  
25 an RPS of 54 percent. Although this pasts the panning

1 period by 2034, Redding does plan to enter into a wind  
2 contract to procure more wind.

3 For the procurement plan, Redding actually examined  
4 a number of scenarios and each scenario consisted of a mix  
5 of both solar and wind resources in Arizona, Oregon, and  
6 Northern California. For their long-term planning  
7 strategy, it wants to minimize reliance on the spot market  
8 and keep costs low by adding diversity to their portfolio.  
9 As I mentioned before, they start procuring new renewable  
10 energy by 2021.

11 I want to highlight from their IRP a little bit of  
12 disadvantaged communities. Redding actually did not find  
13 any areas in their service territory designated as  
14 disadvantaged communities but they do recognize that there  
15 are many areas that are low income. Redding currently  
16 offers a big selection of residential and commercial energy  
17 efficiency programs to its customers, including customers  
18 in low income areas. Some of these programs include  
19 weatherization install, shade tree planting, as well as  
20 rebates for energy efficiency equipment.

21 Based on staff's review, reviewing the IRP and the  
22 reporting tables as well as additional supporting  
23 information, staff finds that the IRP meets all the  
24 requirements under SB 350.

25 Lastly is the Roseville Electric Utility or

1 Roseville. First I want to acknowledge Robert Kennedy, the  
2 staff lead for Roseville IRP for his efforts in reviewing  
3 the IRP and working on the staff paper. I believe we have  
4 a representative from Roseville attending today in person.

5           Roseville is the ninth largest POU in California.  
6 They're locally owned, not for profit, and they reside in  
7 Placer County.

8           Roseville serves almost 60,000 residential and  
9 commercial customers and its peak demand is around 350  
10 megawatts. Roseville submitted their IRP to the Energy  
11 Commission in April of this year. Staff reviewed the IRP  
12 and supporting information and found that it did meet the  
13 requirements of SB 350.

14           For Roseville's demand forecast, they actually show  
15 a small decrease in their demand between 2019 and 2030.  
16 This is due primarily to increase distributed solar energy  
17 efficiency programs and net zero energy homes beginning in  
18 2020. Staff found that Roseville's demand for cast is  
19 comparable to the Energy Commission's mid demand forecast.

20           Roseville's current resource mix. So their current  
21 portfolio consists of mostly spot market purchases, natural  
22 gas, and large hydroelectric resources. Roseville does  
23 have a number of renewable contracts including wind,  
24 geothermal, and mixed renewable contracts that will have a  
25 variety of renewable resources within those.

1           For Roseville's GHG targets, they plan to get down  
2 to 160,000 metric tons by 2030. This is towards the low  
3 end of CARB's range. To meet this target, Roseville plans  
4 to transitions away from the spot market and procure  
5 additional renewable resources. Roseville also plans to  
6 reduce output from its natural gas mass from 2019 and 2030.

7           For Roseville's RPS requirements, they do plan for  
8 a 50 percent RPS. And in 2025, the majority of the  
9 renewable contracts will end and around 2025, they start to  
10 procure additional wind and solar contracts. Any  
11 shortfalls meeting the RPS requirements will be met with  
12 either RPS market purchases or bank for renewable energy  
13 credits.

14           A little bit about energy efficiency in Roseville's  
15 IRP. They do have programs for energy efficiency and  
16 demand response. Some of their programs include lighting  
17 retrofits, smart thermostats, and other behavioral  
18 programs. And currently, most of Roseville's efficiency  
19 savings come from improved lighting technologies. And by  
20 2030, Roseville plans to have more than 150 gigawatt hours  
21 of cumulative energy efficiency savings.

22           So based on staff's review of the IRP, the  
23 reporting tables, and additional supporting information,  
24 staff finds that Roseville's IRP meets all the requirements  
25 of SB 350.

1 Today, I'm requesting the Energy Commission adopt  
2 the executive record of determinations finding each of the  
3 following POU IRPs consistent with requirements of SB 350.  
4 The POU's are Burbank Water and Power, Imperial Irrigation  
5 District, Redding Electric Utility, and Roseville Electric  
6 Utility.

7 I'm happy to answer any questions you have.

8 VICE CHAIR SCOTT: All right. Thank you very much.

9 I think you mentioned that we have a representative  
10 from Burbank Water and Power on the WebEx, do you know if  
11 he or she wanted to say anything?

12 MR. DEEVER: They didn't mention it.

13 VICE CHAIR SCOTT: Okay. And then we have  
14 representatives from Imperial, city of Redding and city of  
15 Roseville here in the audience. Did you want to say  
16 anything or -- okay. They're all -- they're all waving at  
17 me.

18 All right. So let's now turn to public comment,  
19 please. And I have Steve Uhler.

20 Thank you all for being here, by the way.

21 MR. UHLER: Thank you, Commissioners. I'm Steve  
22 Uhler.

23 I'm (indiscernible) with the fact of not having  
24 adopted rules for RPS from 2020 on. Particular 39913(B),  
25 the requirement for long-term contract 65 percent, more

221

1 than ten years and how that would affect these plans.

2           You might recall I petitioned to get a hearing --  
3 to have a hearing for RPS which then you said well you  
4 already have a rulemaking. But it seemed stalled again.  
5 It was stalled for more than two years. I think it would  
6 be important to put some emphasis on this. Even though  
7 this is SB 350, would these people be making different  
8 plans. I know in reference to this long-term contract,  
9 POUs can deduct any community solar options from their  
10 retail. But once they deduct that, those credits can't be  
11 used for compliance for RPS. Decisions of making  
12 communities solar is inhibited by not having these rules  
13 that these plans cover this time period for.

14           So I would wish that we finish up the RPS. It also  
15 affects SMUD's community solar, whether it's used on  
16 rooftop -- or in place of rooftop, it's something that the  
17 public really needs to know about as far as whether or not  
18 their utility can meet the requirements.

19           I'm not sure if you're familiar with the state of -  
20 - or the docket for long-term requirements or whether or  
21 not if you don't meet your 65 percent, none of your credits  
22 count or some other means. But in any case, you should  
23 take this into consideration of the validity of these, even  
24 though they may meet these rules that these folks are  
25 working without certainty. Thank you.

222

1           VICE CHAIR SCOTT: Thank you. Do I have any other  
2 public comment in the room? How about public comment on  
3 the phone? Okay. Seeing none, public comment is closed.

4           Let me now turn to on Item 10, let me now turn to  
5 Commissioner discussion.

6           COMMISSIONER MCALLISTER: I have too many items on  
7 this meeting, I think.

8           So would just thank the team, you know, Paul, just  
9 for leading the charge on this and Mark Koostra, and Julio,  
10 and Robert and just all the individual staff who've taken  
11 on these IRPs. And it's very gratifying to have -- well,  
12 probably more so for you and the team than it is for me to  
13 have all of these through the pipeline now in the first --  
14 first go around of full IRPs. So it's quite an  
15 accomplishment.

16           And I want to thank the four public owned utilities  
17 that we have here, Burbank and Redding, and IID, and  
18 Roseville, for all your yeopeoples, I guess yeomen, yeo  
19 persons' work putting these plans together because it  
20 really represents a lot of thought and a lot of critical  
21 thinking and a lot of obviously planning but in a very  
22 pragmatic grounded way. And you're all a bit different and  
23 we've had, you know, the specifics of each ones are, you  
24 know, contextual to that place. But in general, I think  
25 everyone's done just a terrific job of getting these things



1 to us and then iterating with staff to make sure we  
2 understand them and can give them the green light.

3 On -- I do have one request and not for right now  
4 but just for going forward. It would be good to get the  
5 statewide view and maybe we could get an informational item  
6 on incorporating an IOU IRPs and kind of getting a whole  
7 statewide view of what the IRP enterprise has resulted in.  
8 Because I think we're going to be blown away, I'm quite  
9 impressed overall because, you know, the stories that are  
10 emerging from the different places and each POU and just  
11 sort of all the choices that they're making proactively to  
12 reach our climate goals I think are really major and  
13 impressive.

14 So -- but I guess also just wanted to thank Aleecia  
15 and Siva and the Division staff that's overseeing this  
16 effort. So really good stuff. So thanks a lot, I support  
17 this item.

18 VICE CHAIR SCOTT: Great. Can I get a motion for  
19 Item 10?

20 COMMISSIONER MCALLISTER: Okay. I will move Item  
21 10.

22 COMMISSIONER MONAHAN: I second.

23 VICE CHAIR SCOTT: All right. All those in favor.

24 (Ayes.)

25 VICE CHAIR SCOTT: The motion carries 4-0. Thank

1 you very much.

2 MR. DEEVER: Thank you.

3 VICE CHAIR SCOTT: Next we'll move on to Item 11,  
4 the minutes. Can I get a motion?

5 We have a public comment on Item 11. Steve Uhler,  
6 please.

7 MR. UHLER: Yes. Under your regulations 1105, it  
8 states that the minutes -- and there's a comma, should be  
9 including the texts of the resolutions. But your minutes  
10 don't include the text of the resolutions. Now the way  
11 it's wording, it might not be clear. It's -- when you sign  
12 that as (indiscernible) is the same thing as signing all  
13 the resolutions. But beyond that, notwithstanding any of  
14 this, 1208 requires that in order to be considered records  
15 for the proceeding and the meetings are a proceeding  
16 because you have a definition saying proceedings include  
17 all meetings, I can't find any of these resolutions in the  
18 docket.

19 So I would ask that you hold on approving these if  
20 you agree that the resolution should be in there per  
21 1105(A). And also at least see everything is put in to the  
22 docket forever -- going way back because I have been asked  
23 one of your attorneys Jared Babula is this passed? Because  
24 as an example, you've got an ACM manual that is published  
25 on the website that still it has a disclaimer saying it's

225

1 not approved by you. And that affects what the public can  
2 look at and say well, there's a rule that has not been  
3 approved by the Commission yet.

4 So in any case, I would say don't approve these  
5 minutes and request that the staff install the resolutions  
6 that were adopted and do that for the back minutes.

7 Thank you.

8 VICE CHAIR SCOTT: Let me turn to our chief counsel  
9 to ask if -- how the -- are our minutes appropriate for us  
10 to consider today?

11 COMMISSIONER DOUGLAS: And I'll just say that as  
12 our Chief Counsel looks for the right page just to buy her  
13 a minute to find it, I did have a conversation with her  
14 yesterday about this question so I'm confident that she --  
15 she will find the provision she is looking for.

16 (Whereupon Mr. Uhler approaches the Chief Counsel  
17 to show her where to look.)

18 MR. BABULA: I might be able to assist on this.  
19 This is Jared Babula, Senior Staff Counsel.

20 I just want to add the way the minutes are done is  
21 we identify the -- how the vote was done and then all the  
22 resolutions are on the webpage in the business meeting  
23 webpage and they're available. And so the actual results  
24 of the resolution is included in the meetings. So that's  
25 the way we've been doing it for years.

1           COMMISSIONER DOUGLAS: That's right. And the  
2 minutes reflect the action taken. So the resolution  
3 passed, was it not?

4           MS. HOUCK: And then I think that meets the  
5 requirements of it being evidence of it since they are  
6 posted on there. And I'm going to apologize because it's a  
7 little different than what I've been used to in the past,  
8 but it is sufficient, particularly since they are posted  
9 with the minutes and the minutes reflect the vote.

10           VICE CHAIR SCOTT: All right. So given that, can I  
11 get a motion of Item 11, please?

12           COMMISSIONER MCALLISTER: Move Item 11.

13           COMMISSIONER DOUGLAS: Second.

14           VICE CHAIR SCOTT: All those in favor?

15           (Ayes.)

16           VICE CHAIR SCOTT: The motion carries 4-0.

17           Next is lead Commissioner and Presiding Member  
18 Reports. So we'll start with Commissioner Monahan.

19           COMMISSIONER MONAHAN: Well, I'm happy to report  
20 that my confirmation process has begun. I've got the list  
21 of questions from the Senate Rules Committee and I've  
22 prepared the responses. Submitted it yesterday with a lot  
23 of help from Jana Romero and Ben De Alba and Catherine, my  
24 administrative assistant because there was a lot of last-  
25 minute shenanigans on the computer, and letterhead. But I

1 did submit it, yes. So that's exciting for me.

2 And I also just wanted to let you all know that I  
3 testified recently at the Air Resources Board. They were  
4 reviewing their package of transportation related incentive  
5 programs. And I commented that we've been collaborating  
6 pretty closely and trying to figure out what are the  
7 appropriate lanes considering there's a lot of overlap in  
8 how we do our investments.

9 So we think this conversation was started with Vice  
10 Chair Scott, continued it around our focus more on the  
11 fuels and grid side. They're focused more on the vehicle  
12 side, although there will be some overlap. I think school  
13 buses are a good example where we're investing in the V to  
14 G aspects. We're investing in electric school buses and  
15 the V to G aspects that brings it right to the grid. So I  
16 still there's some overlaps but we're trying to be a little  
17 more deliberative in that. And also even in our  
18 solicitations and our funding, we're trying to think  
19 through how do we support each other. And this is new, I  
20 would say.

21 I hope that's fair, Vice Chair Scott. In terms of  
22 like really trying to be just, you know, even as they are  
23 funding vehicles, how do we make sure we are funding the  
24 right level of support for the infrastructure or fuel side  
25 to support their vehicles investments. So that's an

1 ongoing discussion, shall I say.

2           One little -- two quick things as we're trying to  
3 figure out map out, we had these big transportation  
4 analytical products that are coming up next year. Vehicle  
5 to grid road map and also some charging needs to meet our 5  
6 million e-vehicle by 2030 and the IEPR which has been a  
7 focus on transportation next year. And we're trying to  
8 figure out how to make all these pieces dovetail. Because  
9 it's possible that IEPR could be the place for everything  
10 kind of comes together in this happy way. But we'll  
11 release products strategically through the year to support  
12 that.

13           And the last thing I want to say is we're in the  
14 process of trying to get an executive fellow. I don't know  
15 if we will because there's some magic that happens that I'm  
16 not, but we did interview twelve different fellows which  
17 has been, yeah, it's been quite a wonderful experience to  
18 meet all of these interesting young people who are super  
19 excited to work on clean energy. So good crop of folks for  
20 the future in our field.

21           COMMISSIONER MCALLISTER: That's great. So I will  
22 brief. I've talked way too much already today. But I  
23 guess just a few highlights. I really enjoyed the Redding  
24 SB 100 workshop. I think it was really great and as I said  
25 before thanks to Terra and staff for putting that together

229

1 and lining up great speakers.

2           Then Fritz and I actually went down with a bunch of  
3 staff to look at the cluster of dairy digesters down around  
4 Fresno -- or around Bakersfield, rather, sorry. And  
5 there's some really impressive stuff going on.

6           We funded several of those but the marketplace is  
7 kind of working and they're finding ways to get it done and  
8 install lot of hardware, a lot of huge tarps over these  
9 huge pools of liquid bovine waste. And they are getting a  
10 lot of gas and they're working out ways to get it cleaned  
11 up and into the grid, into the gas grid.

12           And then there's some legacy PPAs that use it to  
13 generate electricity. And it's working. It's pretty  
14 impressive. So I was -- a lot of good technology and  
15 obviously the LCFS kind of makes it all possible, because  
16 that's kind of where the money is these days. But wherever  
17 that gas needs to go it's there and there's quite a bit of  
18 it. So I was very impressed.

19           I had breakfast, and had a chance to talk at some  
20 length with the Chairman of the Board of the National Rural  
21 Electric Cooperative Association, which is those of you who  
22 know me, know that I worked for the Rural Electrical Co-op  
23 movement for about ten years and mostly internationally.  
24 But Curtis Wynn is the General Manager of the Roanoke  
25 Electric Cooperative on the East Coast, but is also

1 Chairman of the Board of NRCA. And it's interesting, I  
2 just mention it because, you know, the cooperative model is  
3 in the news these days as a potential alternative to some  
4 of the business models for the electric sector that are  
5 currently predominating in California.

6 And it, you know, coming up with the CCAs and, you  
7 know, the great munis (phonetic) we have in the state. And  
8 then also kind of the cousin of the munis, which is the co-  
9 ops, which we just have three small bits in the state and  
10 not that many users. But I think we need to hear from them  
11 more as to what they may bring. They have access to cheap  
12 capital. It's backed by the federal government.

13 And they actually do own stuff. You know, they own  
14 poles and wires and they administer all aspects. There are  
15 about more than 800 rural electric co-ops in the U.S. And  
16 they have about ten percent of the customers of the U.S.  
17 and they own thirty percent of the distribution network of  
18 the U.S. I mean, it's millions of miles. And so, you  
19 know, they are ultimately directly accountable to their  
20 customer owners. And so it's a pretty interesting  
21 conversation to have. Who knows where it goes, but I think  
22 that model of sort of how to do things responsible to your  
23 customers and your community, I think, really is the theme  
24 we've been talking about today. So I wanted to bring that  
25 up.



1           And then finally I spent a couple of days down in  
2 Southern California, first the meeting with DWP and then  
3 later with Edison, just to talk about fire resilience and  
4 kind of get up to speed on what's happening in their world.  
5 Procurement, RPS, you know, SB 100, the fire issues  
6 obviously are just front and center for all of them.

7           And interestingly, as the POUs get off of the  
8 Interamerican Power -- Intermountain Power, they're looking  
9 at options. And, you know, doing pump hydro in the Hoover  
10 Dam is one of those options. Looking at how we can take  
11 advantage of all of the transmission infrastructure and  
12 some of the geological formations out at near Intermountain  
13 to store hydrogen, for example, put solar and store  
14 hydrogen. There's a lot of big thinking going on about how  
15 to take advantage of these resources. So I was really  
16 impressed with the level of creativity there.

17           And then with Edison as well, a lot, just a mass of  
18 uptake of EVs and we got a tour, Bryan and I went down and  
19 got a tour of their emergency operations center which is  
20 quite impressive. How they respond to fire and all the  
21 weather capability that they're building. Well not weather  
22 capability, they can't affect the weather. But, you know,  
23 meteorological capability. So but it was kind of good to  
24 talk through some of these long-term planning issues with  
25 them and see what they're thinking.

1           And then last Friday, I spoke at I think it was  
2 the 11th Climate and Energy Loss Symposium down at the  
3 University of San Diego, which as you guys know they named  
4 after Lesley a couple of years ago. So it was a really  
5 beautiful event and very timely all about fire and  
6 resilience and in the legal aspects of all these issues  
7 we've been talking about today, that I've just been talking  
8 about. So that was very gratifying to be down there, both  
9 at the personal and the professional level. So, that's it  
10 for me.

11           COMMISSIONER DOUGLAS: All right. I've been doing  
12 a fair amount of speaking. So but let's see, back in mid-  
13 October, I spoke at the ACORE Grid Forum in San Francisco  
14 and that was a nice opportunity to talk about state energy  
15 policies and renewable energy policies.

16           The next week, I had a chance to tour a NOAA  
17 research boat which was docked in San Francisco. And we  
18 stayed in dock and we were glad we stayed in dock, because  
19 there was the typhoon off of Japan that had caused very  
20 high swell on the sea and they'd actually come into port a  
21 little bit early because of it. And but it was fascinating  
22 for me to get a chance to really see what these research  
23 ships are like and the equipment, the little autonomous  
24 mini subs that go down and take pictures and the, you know,  
25 data and analytics that the incredible volume of data that

233

1 comes back and needs to be sorted and analyzed.

2           And some of the AI capabilities that they're  
3 developing and there was even a connection there with one  
4 of our EPIC funded projects actually and which does a very  
5 similar thing and works through, I was happy to learn, a  
6 similar and coordinated set of research, not a duplicative  
7 one. But it was fascinating. It was absolutely fascinating  
8 to see this and there's so much we don't know about the  
9 oceans.

10           And as we think about not only offshore wind and  
11 the potential but also frankly the dramatic and kind of  
12 frightening changes that are occurring in our world's  
13 oceans and the impacts that we'll have on people around the  
14 world in the environment globally. You know, seeing this  
15 ship and understanding what these people do and the level  
16 of commitment and expertise they bring to that job. And  
17 the many ways it benefits us in the state that I don't  
18 think I really fully have a feel for it before. So that  
19 was a really great opportunity.

20           Let's see here, I'll just skip ahead a bit. I had  
21 an opportunity to go to the Climate Change Research  
22 Symposium in early November. And that was run by OPR and  
23 the Strategic Growth Council and it was a really nice forum  
24 where -- which brought together and state officials, but  
25 really a lot of local and non-profit and community groups

1 to talk about climate change research and what they thought  
2 was important and how you make a difference at a community  
3 level. And the state participants were engaged but we were  
4 also more in listening mode and so I thought that was  
5 really well done.

6 The next day, we had -- well the Governor hosted  
7 the first ever California Tribal Nations Conference which  
8 was modeled on an event that has been done for, you know, a  
9 very long time, in Washington D.C. by the federal  
10 government and where the President meets with tribal  
11 leadership around the country. And this is the first time  
12 we've done that at a state level.

13 So the Governor, you know, spoke at the opening of  
14 this and many tribes participated and they participated at  
15 the government level, typically elected council members  
16 were there. I had an opportunity to speak on a panel about  
17 community development and I had a chance to talk about some  
18 of the microgrid projects that tribes have done and the  
19 impacts of some of those. The really great benefits some  
20 of those have brought as well as some of our work with the  
21 tribal energy conference that we've done and then so on.  
22 And so that was -- that was a really nice event.

23 It ended in the evening with a short, well I  
24 shouldn't say short, but a small reception at the Crocker  
25 Art Museum. And there's a very nice exhibit there actually

235

1 featuring native American art. One of the artists whose  
2 art is exhibited there and spoke at the event and I  
3 recommend it to all of you while it's there. Head on over  
4 to the Crocker, it's really nice.

5           And yesterday we were honored to have a visit by  
6 Amelia Flores who's the Tribal Council Member from the  
7 Colorado River Indian tribes. She came here to, in  
8 particular, participate in showing a documentary about the  
9 tribal perspective and large renewable energy projects.  
10 And we showed that with staff.

11           And we also had an opportunity to have some  
12 informal meetings and bring in our tribal liaisons. Our  
13 tribal liaison, our assistant liaisons, and we invited  
14 participants from other agencies as well, to have a  
15 dialogue with her. And it was a very nice visit. And a  
16 really good opportunity, I think, for our staff, because  
17 it's one thing for me or for some of our tribal-focused  
18 staff to go out and do visits, but to be able to bring the  
19 perspective of tribal leaders here to the Energy Commission  
20 and make some of that dialogue and conversation more  
21 broadly available is a really great opportunity. And  
22 Commissioner Scott participated in the video showing and  
23 the conversation that followed. It was a really nice thing  
24 to be able to do.

25           So that's my report.

1           VICE CHAIR SCOTT: Great. And then from me, I  
2 might just have a high-level response for you on the  
3 transportation work and working closely with the Air  
4 Resources Board and making sure our work is not  
5 duplicative.

6           I think we have worked very hard for many years  
7 to make sure that the works is not duplicative. I do think  
8 the Energy Commission has a strong role to play on the  
9 vehicle side. And what makes me say that, we have a couple  
10 of things with our research program, with research in both  
11 the clean transportation program, helped catalyze the  
12 invention of the low knocks natural gas engine, right,  
13 which is a very, especially when you combine it with  
14 renewable natural gas, is very close to near zero in a  
15 space where we previously didn't have those options. So  
16 that kind of thing comes out of the transportation work  
17 that the Energy Commission does.

18           As you noted, all the vehicle grid integration  
19 work with school buses, how electrified transportation fits  
20 with the grid. I think that fits right in with the Energy  
21 Commission and our strengths and then being able to have  
22 some vehicles out in that space so we can kind of look at  
23 and see what's going on there, I think is really important.  
24 And that's also got a research component that overlaps as  
25 well.

1           And then I think a little bit about the Ports  
2 Collaborative that we have where we were really able to  
3 effectuate getting some equipment pretty quickly out onto  
4 the ports of San Diego, Long Beach, and L.A. We are also  
5 working with Hueneme, Stockton, and Oakland. Not as many  
6 projects there, but it's just a nice opportunity to both  
7 get some of the charging equipment, the vehicles. But also  
8 we were working across the Energy Commission together, so  
9 one of the ports could qualify for ECCA and swap out  
10 lights, for example.

11           We're looking at microgrids for resilience at the  
12 ports. So that's broader than vehicles, but I do think the  
13 Commission has a strong role to play on transportation on  
14 the vehicle side. So those are just my two cents for  
15 what's worth in that space. But I'm really glad that we're  
16 having those conversations with Air Resources Board  
17 because, as you know to get that -- to get to where we're  
18 trying to go on transportation and the timeline that we're  
19 going, we need no dollars duplicating any effort anywhere.  
20 And more dollars than we have in any of those pots, right?  
21 So that's fantastic. I think that's really great.

22           So a couple of highlights from me, I want to note  
23 that we've launched our Empower Innovation website and I'm  
24 going to read to you from the slide quite quickly: Empower  
25 Innovation strives to accelerate your clean tech journey

238

1 with easy access to funding opportunities from the Energy  
2 Commission and other funding providers, curated resources  
3 and events, and connections to people and organizations.

4           And so it's basically having folks be able to  
5 find a partner and have some resources and tools in the  
6 energy innovation space. So check out  
7 empowerinnovation.net. It's a great place to sign up if  
8 you've got a great idea or you're somebody who would love  
9 to test out a great idea. It's kind of little bit of a  
10 matchmaking cite, but we're excited to have that launched  
11 and up and running.

12           I've had a chance to do a few visits. We're  
13 doing a little bit of an Energy Innovation tour to  
14 highlight the great work that the EPIC research program is  
15 bringing to the state of California. We had a chance to  
16 visit West Biofuels which is just down the road here and  
17 one of the things that they're working on is how do you  
18 take some of the tree waste and almond holes and those  
19 types of things and turn it into biofuels. So it's really  
20 interesting to have a chance to visit there, see what  
21 they're working on. And this is a research project, right,  
22 so thinking about how do you scale that up from, you know,  
23 hundreds of gallons to some place where, you know, hundreds  
24 of thousands of gallons.

25           I was able to go to the U.S. DOE Storage and



1 Financing Summit which was fantastic. This obviously was  
2 focused on energy storage. One of the things that I got to  
3 highlight in my presentation there you heard Laurie ten  
4 Hope mention earlier in the business meeting. And that's  
5 really that we want to broaden the types of storage that  
6 we're looking at so we're looking at different types of  
7 chemistries within the batteries. Looking at longer-term  
8 storage, right, so we need something that's eight hours,  
9 ten hours, multiple days of storage, so long-term storage.

10 And we're also looking at ruggedizing the  
11 storage, right, so that if it's in a place and, you know,  
12 God forbid, a fire goes by or an earthquake happens or  
13 something like that, that storage is still going to be up  
14 and running.

15 So those are some of the things that we're  
16 looking at within our research department and it was great  
17 to hear from the financing side what they're interested in  
18 financing. And I think they appreciated hearing from us  
19 the types of things that we're looking to push forward into  
20 not just California, but, you know, once California has  
21 demonstrated it, then these are technologies that can be  
22 used really anywhere where folks are looking to get to a  
23 hundred percent clean energy standard.

24 I had a chance to go to the Emerging Technologies  
25 Coordinating Council Summit. It was right here in

1 Sacramento and I was on a panel where we talked about  
2 national trends in energy and energy efficiency. So I was  
3 with Steve Chalk, who is the VP of Strategic Marketing  
4 Innovations, but he used to be the head of DOE's vehicle  
5 program. Myself, there was Katie Sloane from SCE who was  
6 talking a lot about building electrification in e-mobility.  
7 And then Sharon Tomkins, Strategic Engagement from So-Cal  
8 Gas.

9           So we had quite a good conversation about how do  
10 we start getting towards that hundred percent clean energy  
11 standard with a lot of different viewpoints, you know,  
12 national, statewide, and then utility perspectives both  
13 from electric utility and also a gas utility. So I enjoyed  
14 the opportunity to do that and highlight some of the  
15 research again that our research division is doing in that  
16 space.

17           The Integrated Energy Policy Report Draft is out,  
18 so please take a look for that. We welcome your comments.  
19 We look forward to them. That was a lift, so I'm delighted  
20 that that's out there for comment. I think it's well done.  
21 It's got really interesting trends that are, you know, new  
22 trends that are taking place in California energy. So  
23 it's, you know, it's worth the read. It's long, but it's  
24 worth the read. It's great.

25           And then, last, but certainly not least, I want

241

1 to welcome Miina Holloway, who is my new Administrative  
2 Assistant. I'm so delighted to have her on board. This is  
3 week two or is it week three, so she's really quite new.  
4 I'm delighted to have her here and so hopefully you'll have  
5 a chance to stop by or shoot her an email and introduce  
6 yourself. And I warmly welcome her to the Commission.

7 So with that, I see that we have one public  
8 comment on the Lead Commissioner and Presiding Member  
9 reports from Steve Uhler.

10 MR. UHLER: Thank you, Commissioners. I'm Steve  
11 Uhler. Recently read of an intern who is interested in one  
12 day running the Cal ISO. I'd like you to think about  
13 finding interns who would be interested in doing away with  
14 the need for balancing authorities injecting different  
15 ideas. Unfortunately I missed the load thing. I was going  
16 talk a bit on things that would help get rid of the Cal ISO  
17 and handle balancing.

18 I'm very much interested in biofuels. If I had a  
19 good biofuel, and if I had a good internal combustion  
20 engine that would drive a generator and I could take the  
21 waste heat and heat my house, I could drive my carbon  
22 footprint even lower. Currently my carbon footprint is  
23 zero for electricity and I'm in Sacramento County. That's  
24 pretty hard to do here with only renewables en banc, or  
25 solar, and it's only about 3 percent. So yeah, I do not

242

1 draw any power off the grid.

2 I'd like to be able to enable some features to  
3 balance stuff, but there are some barriers, some equipment  
4 barriers I'd like to see corrected as far as that's  
5 concerned.

6 Another area that I wish you would look into is a  
7 quality management system. I'm really concerned that I am  
8 told things by staff that turn out to later not be true.  
9 I've come here and/or I've turned in written comment that  
10 didn't get read by the Public Advisor. That's a prior  
11 official Public Advisor. The Interim Public Advisor also  
12 didn't read my comments.

13 My comments, I had agenda items to comment  
14 against. So I put in a petition requesting, because my  
15 statements are not in the transcript. Apparently it can't  
16 get beyond staff. Staff somehow have jurisdiction to limit  
17 what your regulations say. I want to know why my comments  
18 didn't get in.

19 I'm actually rolling -- you'll see that I'm going  
20 to talk on every agenda item coming. And I would like to  
21 do this in this in this one shot here. There needs to be  
22 something done about a situation of people believing the  
23 website is an official document. It's not an official  
24 document. The APA needs to be observed. When you notice a  
25 meeting, when you notice a meeting for formal rulemaking,

243

1 the Bagley-Keene (indiscernible) you can actually adjourned  
2 this meeting for a moment, have that hearing and restart  
3 the meeting.

4 So until they actually do that properly, it looks  
5 like I need to prepare for that.

6 VICE CHAIR SCOTT: So let me you, sir --

7 MR. UHLER: I'll stop there and then I'll wait  
8 for the next one.

9 VICE CHAIR SCOTT: Okay. So next is our Executive  
10 Director Report, please.

11 MR. BOHAN: Thank you. Just two quick items first.  
12 The day after last months' business meeting, Secretary  
13 Crowfoot hosted a speaker's series event over at the  
14 Natural Resources Agency building and the 200 plus person  
15 auditorium was pretty well packed. And he gave a really  
16 nice overview of his goals in the administration. And was  
17 barraged, I would say, with questions and we would probably  
18 considerably still be there if he would have entertained  
19 them for long enough. So people -- our staff were really  
20 engaged. I was really pleased to see it.

21 Second, I just wanted to report on mandatory  
22 training. We're doing very well approaching a hundred  
23 percent. Thanks.

24 VICE CHAIR SCOTT: Thank you.

25 I now have public comment from Steve Uhler on the

1 Executive Director's Report.

2 MR. UHLER: Continuation on the Executive Director.

3 There's been a couple of times where I've turned in  
4 information about -- I know your website's in transition,  
5 but some of the techniques that are being used are totally  
6 inappropriate to a public website. You are putting into  
7 production dead links that I report. And they say oh well,  
8 now you have to type ww2. Well, no. That link is on your  
9 website. I don't know where that link goes. I don't know  
10 this ww2 thing. That needs to be tightened up.

11 And, again, the website is not an official  
12 document. Your --

13 VICE CHAIR SCOTT: Can you please make sure your  
14 comments are relevant to the Executive Director's Report?

15 MR. UHLER: Yes, the Executive Director apparently  
16 handles your website. Yeah, because that's -- I got a  
17 comment from somebody telling me oh we have 50,000 pages.  
18 And we're going to get to removing notices telling people  
19 this room is double booked and apparently triple booked  
20 from --

21 VICE CHAIR SCOTT: Mr. Uhler --

22 MR. UHLER: -- from a little sign that was put out  
23 there.

24 MS. HOUCK: When -- the public comments should be  
25 directed to the comments that Mr. Bohan, as the Executive

245

1 Director, made during his report. Not just generally about  
2 the Commission, so it should be on topic for the item on  
3 the agenda.

4 MR. UHLER: While, on topic, then I would like to  
5 say that he should publish what he's going to talk about,  
6 so I can more concisely deal with it. I'm making a  
7 recommendation related to the Executive Director. I'm  
8 making the recommendation of what the Director should be  
9 doing. From the public's point of view what is the  
10 priority.

11 VICE CHAIR SCOTT: So I think on that item that can  
12 be in Item 15 for public comment. As our Chief Counsel has  
13 mentioned for Item 13, it's relevant to what the Executive  
14 Director reported. Would you like to wait for Item 15? Or  
15 do you have a comment specific to what he reported?

16 MR. UHLER: Specific to what he reported.

17 VICE CHAIR SCOTT: Yes, please. That's --

18 MR. UHLER: I would like to make a comment that he  
19 needs to focus on things that directly affect the public,  
20 the website. The fact that notices are left and the public  
21 is left to believe that they should continue work in order  
22 to be able to comment on other meetings that have been  
23 noticed that have not been cancelled.

24 Thank you.

25 VICE CHAIR SCOTT: All right. Now we are on to

1 Item Number 14, the Public Advisor's Report, please.

2 MS. AVALOS: There is no update for the Public  
3 Advisor.

4 VICE CHAIR SCOTT: All right. Thank you.

5 Mr. Uhler, I see you have a comment on the Public  
6 Advisor's Report, please.

7 MR. UHLER: Directly because the Public Advisor's  
8 not making any comments about what I directly asked the  
9 Public Advisor to do. One, ensure that items report are  
10 made for the record 1208.8. So that's not being done.  
11 I've asked the Public Advisor to find out why my --

12 COMMISSIONER DOUGLAS: Mr. Uhler, you're -- a  
13 Public Advisor didn't have a report.

14 MR. UHLER: It didn't and that's so now I'm  
15 commenting, it's -

16 COMMISSIONER DOUGLAS: All right, and so when you,  
17 when we get to public comment --

18 MR. UHLER: I'm saying that I would like the Public  
19 Advisor to come up and explain why --

20 COMMISSIONER DOUGLAS: The Public Advisor, I think,  
21 has been talking to you. But I think it would be very  
22 helpful for the Public Advisor to continue talking to you  
23 and if you continue to have --

24 MR. UHLER: Okay, I just want to make the  
25 Commissioners aware --



1 COMMISSIONER DOUGLAS: Thank you.

2 MR. UHLER: -- that you should be reading the  
3 docket of the Public Advisor and what I'm asking about it.  
4 And I would like you to reply to what I've asked the Public  
5 Advisor.

6 COMMISSIONER MCALLISTER: Sir, all of your comments  
7 that you want to make about the Public Advisor in general,  
8 about the Executive Director in general, need to go in the  
9 public comments section, which is your chance under Item  
10 16. Otherwise you haven't -- so you can't comment on  
11 something that wasn't said. So --

12 MR. UHLER: Okay. So --

13 COMMISSIONER MCALLISTER: We'll get to Item 16 --

14 MR. UHLER: Not 16, it's 15.

15 COMMISSIONER MCALLISTER: We'll get to Item 16 and  
16 that's the public comment item.

17 MS. HOUCK: It is --

18 VICE CHAIR SCOTT: It's Item 15.

19 MS. HOUCK: -- Item 15.

20 COMMISSIONER MCALLISTER: It is 15. Oh, I'm sorry.

21 VICE CHAIR SCOTT: So let's --

22 COMMISSIONER MCALLISTER: So past the Public  
23 Advisor, so 16 is actual public comment.

24 VICE CHAIR SCOTT: So let's now turn to Item 15  
25 which is public comment. Mr. Uhler, please go ahead.

1           MR. UHLER: Okay. The Bagley-Keene allows the  
2 public to comment about the agenda items. Agenda items  
3 like your Lead Commissioner Reports and stuff where you do  
4 not publish. I see reading from a document. You don't  
5 publish this, so the public has no idea what you're going  
6 to talk about. But it's some very important stuff that  
7 should be commented on.

8           The Executive Director, no idea. So I'm going to  
9 sign up for that and then I'll find out oh or the Public  
10 Advisor decides to not comment on the subjects that I've  
11 been put on this business meeting docket, the Public  
12 Advisor is not talking about. So what happens with these  
13 written comments? What happens with them?

14           I heard some talk of not speaking to what was  
15 written for SMUD's agenda item, because it was already in  
16 the written. I didn't -- you guys didn't deliberate over  
17 my comments related to a video. I'd like to know if any of  
18 you saw the video and SMUD's notion of about how they  
19 structure their rates and costs, which have a very large  
20 impact on cost effectiveness related to that project.

21           But I'm looking, I'm putting time in to put this  
22 stuff in writing in a docket that I'm told is for the  
23 business meeting. And I am expecting to hear replies on  
24 that, replies on that. And that's what I'm here now for.

25           So I'm going to take it that you don't know what

1 I've asked the Public Advisor. You don't know about me  
2 asking about why is it, like I say, you do not cancel the  
3 meetings appropriately. These are formal rulemaking  
4 meetings that need to be canceled appropriately, which  
5 wastes the public's time.

6 So and I also would like to know is there a quality  
7 management program here such as ISO 9000 or something based  
8 on Deming principles or something, because I'm seeing  
9 situations where efficiencies here are pretty low. In a  
10 room that's named for efficiency, you have some really low  
11 efficiencies on being able to display information. I'm  
12 still waiting for information from your attorney here on  
13 where is the document for the ACM manual that doesn't have  
14 a disclaimer that says it's not approved. I can't find it  
15 in a docket anywhere. Although he says there's a  
16 resolution. I can't find that resolution anywhere without  
17 having to ask him.

18 These are efficiency issues that can be dealt with.  
19 I'm a technologist who worked in manufacturing engineering.  
20 There is a lot of efficiency that could be improved. You  
21 would be working with better information. You would know  
22 further out. You would know a lot more exactly what would  
23 go on. So yeah, I ask that you consider that.

24 And I also, speaking on the Chief Counsel --

25 VICE CHAIR SCOTT: And we also have -- I'm sorry,

250

1 your time's up.

2 We have a public comment from Paul Kangas.

3 MS. AVALOS: Yes. This is Rosemary with the Public  
4 Advisor's Office commenting for Mr. Kangas.

5 "I speak for rooftop solar in opposition to giant  
6 corporate solar farms. The best way to stop the climate  
7 emergency is to build millions of fourplex homes each with  
8 100 percent solar panels and require PG&E to pay 49 cents  
9 kilowatts to solar homes that sell solar on the grid.  
10 Replace burned single family homes with fourplex solar  
11 homes like in Paradise, California, to expand the amount of  
12 new solar housing and pass SB 50.

13 "Decentralize a solar energy generation that will  
14 give homeowners control over energy generation. This will  
15 lower the cost of housing since the income from the 100-  
16 plus panel roofs will generate money to help pay the  
17 mortgage. This will lower mortgages just like the cost of  
18 cell phones keep dropping, Mores Law, by using more good  
19 solar payment policies, AI, and advanced technologies. Do  
20 not build giant corporate solar farms.

21 "We solar homeowners don't want to pay corporations  
22 for solar. Worse we lose 50 percent of the energy  
23 generated if it is transmitted over 50 miles on the grid.  
24 YouTube at Paul8Kangas. Thank you for your consideration."

25 VICE CHAIR SCOTT: Thank you. I don't think I have

251

1 any other public comment in the room. Do I have public  
2 comment on the phone?

3 Okay. Let's go on to Item 16, the Chief Counsel's  
4 Report.

5 MS. HOUCK: I have no report at this time.

6 VICE CHAIR SCOTT: All right. With that then our  
7 meeting is adjourned.

8 Thank you, everyone.

9 (The Business Meeting adjourned at 4:16 p.m.)

10 --oOo--

11

12

13

14

15

16

17

18

19

20

21

22

23

24

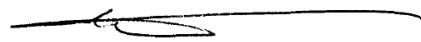
25

**REPORTER' S CERTIFICATE**

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

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

IN WITNESS WHEREOF, I have hereunto set my hand this 15th day of November, 2019.



---

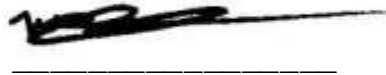
PETER PETTY  
CER\*\*D-493  
Notary Public

**TRANSCRIBER'S CERTIFICATE**

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

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

IN WITNESS WHEREOF, I have hereunto set my hand this 15th day of November, 2019.



Myra Severtson  
Certified Transcriber  
AAERT No. CET\*\*D-852

**TRANSCRIBER'S CERTIFICATE**

I do hereby certify that the testimony in the foregoing hearing was taken at the time and place therein stated; that the testimony of said witnesses were transcribed by me, a certified transcriber.

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

IN WITNESS WHEREOF, I have hereunto set my hand this 15th day of November, 2019.



Jill Jacoby  
Certified Transcriber  
AAERT No. CERT\*\*D-633