

DOCKETED

Docket Number:	20-BUSMTG-02
Project Title:	Public Comment on California Energy Commission Business Meetings
TN #:	231818
Document Title:	January 22, 2020 Business Meeting Transcript
Description:	N/A
Filer:	Cody Goldthrite
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	1/31/2020 9:07:37 AM
Docketed Date:	1/31/2020

BUSINESS MEETING
BEFORE THE
CALIFORNIA ENERGY COMMISSION

In the Matter of:)
) 20-BUSMTG-01
 Business Meeting)
 _____)

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

WEDNESDAY, JANUARY 22, 2020
10:00 A.M.

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
Darcie Houck, Chief Counsel
Michael Murza, Chief Counsel's Office
Nick Oliver, Chief Counsel's Office
Jacqueline Moore, Chief Counsel's Office
Nancy Fletcher, Air Resources Engineer
Mazi Shirakh, PE, Project Manager
Rosemary Avalos, Public Adviser's Office
Cody Goldthrite, Secretariat

Agenda Item

Steven Kerr	3
Lisa DeCarlo	3
Eric Veerkamp	4
Nick Fugate	5
Cheng Moua	6
Peter Strait	7
Balraj S. Sandhu	8
David Michel	9
William Pfanner	10
Geoffrey Dodson	11
Eleanor Oliver	12

Others Present (* Via WebEx)

Interested Parties

Scott Galati, for Oppidan Investments	3
Drew Johnson, Oppidan Investments	3
Jeff Harris, for Geysers Power Co.	4
Barbara McBride, Calpine Corp.	4
Paul Hauser, Trinity PUD	6

APPEARANCES (Cont.)

Interested Parties (Cont.)

Greg Mahoney, City of Davis	7
*Eli Goldstein, SkyCool Systems, Inc.	12
Joy Larson, New Energy Nexus	12
David Frost, InPipe Energy, Inc.	12
Dr. Eric Cummings, MaxOut Renewables	

Public Comment (* Via WebEx)

Agenda Item

Delphine Hou, CAISO	5
Wes Scribner	6
Joanne Harper	6
Lauren Cullum, Sierra Club	7
Nikita Koraddi, NRDC	7
Kevin Messner, AHAM	

I N D E X

	Page
Proceedings	8
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.)	8
a. ALLIANCE TO SAVE ENERGY MEMBERSHIP	
b. NATIONAL ENVIRONMENTAL BALANCING BUREAU 2019 UPDATE REPORT (13-ATTCP-01)	
c. CAMPTONVILLE COMMUNITY PARTNERSHIP	
d. CALIFORNIA CLEAN ENERGY FUND DBA CALCEF VENTURES - Amendment 1 to grant EPC-18-002	
e. CALIFORNIA CLEAN ENERGY FUND DBA CALCEF VENTURES	
i. Transfer of \$150,000 award for project titled "Enhancing Renewable Fuel Production with CO2 Microbubbles" from University of California (UC), Riverside to OceanForesters.	
ii. Transfer of \$150,000 award for project titled "Graphite-coated High Energy Density Powder" from UC, Riverside to SiLi-ion, Inc.	
iii. Transfer of \$150,000 award for project titled "Low-Cost Portable Smart WiFi Programmable Learning Bio-Mimicking Solar Shrub" from California State University, Fullerton to Aura Technology LLC.	
f. ADVANCED POWER AND ENERGY PROGRAM (APEP)	
g. ORDER INSTITUTING RULEMAKING PROCEEDING (20-AAER-01)	
2. Small Power Plant Exemption for the Laurelwood Data Center (19-SPPE-01)	xx

I N D E X (Cont.)

3.	Mission College Data Center (19-SPPE-05)	9
4.	Lake View Geothermal (79-AFC-01C)	13
5.	California Energy Demand Forecast, 2019-2030 (19-IEPR-03)	16
6.	Trinity Public Utility District (19-BSTD-05)	30
7.	City of Davis Local Ordinances Exceeding the 2019 Energy Code (19-BSTD06)	44
8.	City of San Leandro	53
9.	Rim of the World Recreation and Park District	55
10.	Digital Energy, Inc.	56
11.	Renewable Energy for Agriculture Program - Farmers' Fresh Mushrooms California, Inc.	58
12.	California Clean Energy Fund DBA CalCEF Ventures	66
a.	CALSEED INITIATIVE 2019 PROTOTYPE AWARDS	
i.	Stasis Group, Inc., Modesto	
ii.	Empow Lighting, LLC, Sacramento	
iii.	Maxout Renewable, Inc., Livermore	
iv.	InPipe Energy, Inc., Chino	
v.	GenH, Inc., Palos Verdes Estates	
vi.	SkyCool Systems, Inc., Mountain View	

I N D E X (Cont.)

13.	Minutes	79
14.	Discussion Item: Lead Commissioner or Presiding Member Reports	81
14.	Discussion Item: Executive Director's Report	98
15.	Discussion Item: Public Adviser's Report	98
16.	Public Comment	24, 34, 49, 98
17.	Discussion Item: Chief Counsel's Report	103
	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. <i>In the Matter of U.S. Department of Energy (High Level Waste Repository) (Atomic Safety Licensing Board, CAB-04, 63-001-HLW); State of California v. United States Department of Energy (9th Cir. Docket No. 09-71014)</i>	
	ii. <i>Communities for a Better Environment and Center for Biological Diversity v. Energy Resources Conservation and Development Commission, and California State Controller, (Alameda County Superior Court, Case No. RG13681262)</i>	
	iii. <i>State Energy Resources Conservation and Development Commission v. Electricore, Inc. and ZeroTruck (Sacramento County Superior Court (34-2016-00204586)</i>	
	iv. <i>Natural Resources Defense Council, Inc., et al. v. United States Department of Energy (Federal District Court, Northern District of California, (17-cv03404)</i>	

I N D E X (Cont.)

18. Chief Counsel's Report (Cont.)	103
v. <i>City of Los Angeles, acting by and through, its Department of Water and Power v. Energy Commission</i> (Los Angeles Superior Court, Case No. BS171477).	
vi. <i>Helping Hand Tools v. California Energy Commission, and Vantage Data Centers LLC</i> (Sacramento Superior Court, Case No. 34-2018-80003026).	
vii. <i>In re: PG&E Corporation and In re: Pacific Gas and Electric Company</i> (United States Bankruptcy Court, Northern District of California, San Francisco Division, Case No. 19-30088)	
viii. <i>State Energy Resources Conservation and Development Commission v. HyGen Industries, Inc.</i> (Sacramento County Superior Court, Case No. 34-2019-00252543)	
ix. <i>National Electrical Manufacturers Association, et al. v. CEC, et al.</i> (U.S. Eastern District Court of California Case No. 2:19-cv-02504)	
x. <i>Olson-Ecologic Testing Laboratories, LLC v. CEC.</i> (Orange County Superior Court Case No. 30-2019-01115513).	
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	104
Reporter's Certificate	105
Transcriber's Certificate	106

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

P R O C E E D I N G S

JANUARY 22, 2020 10:05 a.m.

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

(Whereupon the Pledge of Allegiance is recited)

CHAIR HOCHSCHILD: Well, Happy New Year to everybody. And as a hardcore San Francisco 49ers fan, the year has started very well for me, my voice is a little bit hoarse from yelling at the TV on Sunday.

So we're going to first take up just the Consent Calendar Item 1a and Commissioner McAllister is going to recuse.

COMMISSIONER MCALLISTER: Yeah I was kind of glad that the Titans lost, because I was going to have a hard time figuring out who to root for. But it's good the 49ers won.

So I am on the Board of the Alliance to Save Energy. And this is a membership is Item 1a, and so the Commission is a long-standing member of the Alliance. And so I'm going to step out and recuse myself from that vote.

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

COMMISSIONER DOUGLAS: Move approval of Item 1a

CHAIR HOCHSCHILD: Moved by Commissioner Douglas.

VICE CHAIR SCOTT: Second.

CHAIR HOCHSCHILD: Second by Vice Chair Scott.

1 All in favor say aye.

2 (Ayes.)

3 CHAIR HOCHSCHILD: That item passes 4 to nothing.

4 And now we'll take up the remainder of the
5 Consent Calendar. Is there a motion for items b through g?

6 COMMISSIONER DOUGLAS: Move the Consent Calendar
7 Items b through g.

8 VICE CHAIR SCOTT: Second.

9 CHAIR HOCHSCHILD: All in favor say aye.

10 (Ayes.)

11 CHAIR HOCHSCHILD: That motion passes
12 unanimously. Item 2 has been pulled, so we'll move on to
13 Item 3, Mission College Data Center. Go ahead.

14 MR. KERR: Good morning Chair and Commissioners.
15 My name is Steve Kerr. I supervise the Siting and CEQA
16 Review Unit of the Environmental Office of the Siting,
17 Transmission and Environmental Protection Division. With
18 me are staff attorneys Lisa DeCarlo and Mike Murza. We're
19 here to present a proposed order appointing a committee to
20 oversee a Small Power Plant Exemption, or SPPE proceeding
21 for the Mission College Data Center Project.

22 The SPPE option is only available for thermal
23 power plants between 50 and 100 megawatts. And pursuant to
24 Public Resources Code, Section 25541 the exemption can only
25 be granted if no substantial adverse impact on the

1 environment or energy resources will result from the
2 construction or operation of the proposed facility. The
3 Applicant, Oppidan, filed its SPPE application on November
4 25th, 2019 seeking an exemption from the Commission's power
5 plant application for certification process.

6 The Mission College Data Center would be in Santa
7 Clara and include two three-story buildings housing data
8 servers and associated diesel-fired backup generators to
9 provide an uninterruptable power supply of up to 78.1
10 megawatts during an emergency utility power outage.

11 Staff will conduct an environmental review of the
12 exemption application and produce an Initial Study. In
13 addition to the Mission College Data Center, staff is
14 currently working on the Walsh, Sequoia and San Jose City
15 Data Center projects. Staff anticipates submittal of three
16 more SPPE applications for data centers in the San Jose and
17 Santa Clara area within the next month.

18 Thank you. We'd be happy to answer any questions
19 you may have.

20 CHAIR HOCHSCHILD: Yeah. So the committee we
21 were proposing is Commissioner Douglas as Lead and Vice
22 Chair Scott as Associate. But do we want to hear from --
23 did you want make any comments or questions or should we
24 hear from the Applicant?

25 COMMISSIONER DOUGLAS: No, I think should hear

1 from the Applicant. Thank you.

2 CHAIR HOCHSCHILD: Okay. Yeah, go ahead.

3 MR. GALATI: Scott Galati representing Oppidan
4 Investments.

5 MR. JOHNSON: Drew Johnson, Oppidan Investments.
6 We're the current owner and landlord.

7 MR. GALATI: Commissioner, thank you very much
8 for giving me the opportunity here. What's being brought
9 to you is kind of unique.

10 In 2018, this project already got a permit to be
11 built by the City of Santa Clara. There was a full Initial
12 Study, an MMD, prepared and adopted. And in fact
13 demolition permits have been issued and demolition is
14 ongoing. What has happened now is there are some minor
15 changes to the project that are being proposed. And this
16 was now at a time when we all know that these projects need
17 to come to the Energy Commission.

18 So just real briefly, the project's changes are
19 it's entirely within the same site. It's basically
20 replacing one larger building with two smaller buildings.
21 It's relocating the generators into the center and reducing
22 from 120 small generators to 43 larger generators. It is
23 relocating the substation within the site, relocating the
24 access and the entrance way into the site. And it is
25 revising the cooling option to reduce water by 90 percent

11

1 over what was originally approved.

2 Oppidan went out and hired the consultant that
3 the City of Santa Clara hired to prepare the original
4 IS/MND for the city and asked them to prepare this
5 application in the same form that the city would use as an
6 addendum. And that's what we've done.

7 So we ask and we believe that especially with
8 staff's current work load this ought to be a lot easier
9 than projects that are green field projects so to speak.
10 The IS/MND has already been certified and all that staff
11 needs to do is look at the changes, relying on the old
12 IS/MND. It's only been adopted in July of 2018. And we're
13 hoping that that reduces staff's load and this can go a lot
14 quicker than some of the projects that you have, that I
15 have before you, which are the environmental analysis has
16 not been done and they're starting from scratch.

17 So that's what makes this unique. Time is of the
18 essence. Phase 1 already has a tenant ready to move in as
19 soon as we can build it. So we ask that this project get
20 expedited and expedited in a way that makes a lot of sense.
21 Let's do this much more as an addendum than starting from
22 scratch. Thank you.

23 CHAIR HOCHSCHILD: Thank you.

24 Yeah. Staff?

25 MS. DECARLO: Lisa DeCarlo, Staff Counsel.

1 Generally when we have a situation where the city has
2 already done an environmental analysis, we do use to the
3 extent we can information provided and analysis provided.
4 So we'll certainly do so in this case as well and expedite
5 the analysis to the extent we can.

6 CHAIR HOCHSCHILD: Okay. Unless there's
7 additional Commissioner comments we'll just take public
8 comment on this. Is there anyone in the room wishing to
9 make a comment or on the phone? Hearing none, did you want
10 to say anything else before --

11 COMMISSIONER DOUGLAS: No. Go ahead.

12 CHAIR HOCHSCHILD: Yeah, is there a motion to
13 appoint Commissioner Douglas as Lead and Vice Chair Scott
14 as Associate for this committee?

15 COMMISSIONER DOUGLAS: So moved.

16 CHAIR HOCHSCHILD: All right.

17 VICE CHAIR SCOTT: Second.

18 CHAIR HOCHSCHILD: All in favor say aye.

19 (Ayes.)

20 CHAIR HOCHSCHILD: That motion passes
21 unanimously. Thank you all.

22 CHAIR HOCHSCHILD: Let's move on to Item 4, Lake
23 View Geothermal.

24 MR. VEERKAMP: Ah, there's a green light. Good
25 morning, Commissioners. My name is Eric Veerkamp. I work

1 in the Compliance Office of the Siting, Transmission and
2 Environmental Protection Division. I'm the Project Manager
3 for the Lake View Unit 17 Geothermal Project.

4 For your consideration this morning is a post
5 certification petition for modification of the Lake View
6 project. With me this morning is Nick Oliver, Staff
7 Counsel. And we do have Nancy Fletcher in the room from
8 our Air Quality Engineering Unit as well. And there are
9 representatives from the project owner here as well.

10 Lake View, formerly known as PG&E Geysers Unit 17
11 Geothermal Project is an operational geothermal facility
12 located in Sonoma County.

13 The petition for modification requests the
14 addition of a stationery permanent emergency diesel engine
15 for the cooling tower wet-down system. The emergency
16 diesel engine would be used to prevent fire damage to the
17 cooling tower from approaching wildfires. This proposed
18 modification is similar to the amendments for Grant,
19 Socrates and Quicksilver geothermal plants approved by the
20 Commission in December of 2018.

21 In order to provide clarity and eliminate
22 confusion between Air District conditions and CEC
23 Conditions of Certification, staff has proposed revised,
24 renumbered and reordered Air Quality Conditions of
25 Certification for consistency with the Northern Sonoma

1 County Air Pollution Control District permit language for
2 this project.

3 Staff concluded that with the adoption of the
4 Amended Conditions of Certification approval of the
5 petition will not have a significant effect on the
6 environment and will not affect the project's ability to
7 continue to comply with LORS.

8 Staff is recommending commission approval of the
9 petition to install a new permanent diesel engine-driven
10 pump for the cooling tower wet-down system at Lakeview
11 along with the new proposed Air Quality Conditions of
12 Certification set forth in staff's analysis.

13 This concludes my presentation and I'll be happy
14 to take any questions you might have.

15 CHAIR HOCHSCHILD: Commissioner Douglas?

16 COMMISSIONER DOUGLAS: Just a brief comment.
17 Actually let me see if the Applicant would like to say
18 something.

19 MR. HARRIS: Good morning. Jeff Harris on behalf
20 of the Geyers Power Company. In what will become your
21 favorite appearance by me I don't have anything to add at
22 this point, so thank you. (Laughter.)

23 CHAIR HOCHSCHILD: That's the first time you've
24 said that, Jeff.

25 MS. MCBRIDE: And Barbara McBride with Calpine,

1 yeah. I have nothing to add but to thank staff for pushing
2 this amendment through quickly, so we can get the pump
3 installed.

4 COMMISSIONER DOUGLAS: All right, well I just
5 wanted to say that this item reflects pro-active steps
6 taken by Energy Commission staff and by the Applicant to
7 improve resilience and safety at this power plant and to
8 ensure that they're able to run the cooling tower wet-down
9 system when needed. And I think this is very important.
10 I'm happy to see it here and I move approval of the item.

11 CHAIR HOCHSCHILD: Is there a second?

12 VICE CHAIR SCOTT: Second.

13 CHAIR HOCHSCHILD: I'm sorry. Did I call for
14 public comment? Sorry, is there any public comment in the
15 room or anyone on the phone? Hearing none, is there a
16 motion.

17 COMMISSIONER DOUGLAS: Move approval.

18 VICE CHAIR SCOTT: Second.

19 CHAIR HOCHSCHILD: All in favor say aye.

20 (Ayes.)

21 CHAIR HOCHSCHILD: That motion passers
22 unanimously. Thank you.

23 CHAIR HOCHSCHILD: We'll move on to Item 5,
24 California Energy Demand Forecast.

25 MR. FUGATE: Good morning, Commissioners. I'm

1 Nick Fugate with the Energy Assessments Division. And I'm
2 here today to propose adoption of the California Energy
3 Demand 2020 to 2030 Forecast.

4 The demand forecasting is one of the Energy
5 Commission's core responsibilities. And if adopted today,
6 the forecast will be incorporated into the 2019 IEPR. The
7 demand forecast is also a critical planning tool and lays
8 the foundation for a number of state-sponsored planning and
9 procurement efforts including transmission and distribution
10 planning, integrated resource planning, resource adequacy
11 and other activities aimed at keeping California's energy
12 clean, affordable and reliable.

13 2019 was a full forecast cycle. Not only did we
14 refresh all of our inputs and conduct a complete set of
15 model runs, we also made some analytic improvements.
16 Climate change impacts were incorporated into the forecast
17 through adjustments to hourly temperatures based on new
18 projections from Scripps Institute of Oceanography. The
19 forecast includes incremental load growth associated with
20 projected increases in cannabis cultivation following
21 legalization in California and surrounding states.

22 Our hourly model now uses refreshed load shapes
23 for energy efficiency, electric vehicle charging and time-
24 of-use rate impacts. In a staff analysis of battery charge
25 and discharge profiles allowed us to include behind-the-

1 meter storage impacts in our hourly forecast. All of these
2 improvements were presented and discussed during IEPR
3 workshops in 2019.

4 As part of every forecast we produce a set of
5 high, mid and low-demand scenarios that reflect assumptions
6 around energy efficiency, which are committed. That is we
7 know when and how they are being implemented. These are
8 our baseline scenarios. Of course, California has some
9 ambitious climate goals. And there are a number of
10 additional programs, standards and measures that have been
11 proposed or that are already in development.

12 It's reasonably likely that these additional
13 efforts will occur, but there is significant uncertainty
14 around their implementation. So in order to ensure that a
15 reasonable level of efficiency is considered in procurement
16 and system planning, we developed additional achievable
17 scenarios, or AAEE.

18 Each AAEE scenario represents savings that should
19 be expected from future measures, given a particular set of
20 assumptions around their timing, duration and funding.
21 Importantly, an AAEE scenario can be paired with a baseline
22 scenario to create a managed forecast for planning.

23 This is our statewide forecast of electricity
24 sales and a high-level example of these baseline scenarios.
25 The spread between them reflects different assumptions

1 around economic and demographic activity, retail rates,
2 climate change impacts and photovoltaic systems and
3 electric vehicle adoption.

4 The efficiency assumptions are relatively
5 consistent across all three scenarios at the baseline
6 forecast contains only programs and standards that are
7 fully committed.

8 In the mid-case, the addition of significant
9 amounts of PV along with projected increases in utility
10 rates depress growth in the near term. Toward the end of
11 the forecast, PV additions taper off and electric vehicle
12 adoption contributes to long-term growth of a little over
13 half a percent annually.

14 The story is similar for our non-coincident
15 statewide peak forecast. PV additions have less of an
16 affect though as the system peak hour shifts later in the
17 day when PV output is reduced. Also, load growth from
18 electric vehicles is not as significant since the bulk of
19 EV charging is expected to occur outside of time-of-use
20 peak windows. Here long-term growth is a little under half
21 of a percent.

22 This slide illustrates the consumption savings
23 associated with each of six AAEE scenarios. The name of
24 each scenario indicates first which baseline scenario these
25 savings are meant to be paired with, and second the level

1 of assumed program commitment. The high- low savings
2 scenario, for example, is meant to be paired with our high
3 baseline forecast and represents a relatively low level of
4 savings.

5 The mid-mid scenario, which is commonly used for
6 planning, reaches about 16,500 gigawatt hours by 2030. A
7 little over half of the savings expected over the same
8 years during the previous forecast cycle. This is due
9 largely to a sizable decrease in traditional IOU program
10 investment.

11 For this cycle, however, our staff significantly
12 expanded their analysis of savings opportunities beyond
13 traditional utility programs. And so the mid-high plus
14 case, a bookend scenario which assumes the most aggressive
15 level of program commitment reaches over 48,000 gigawatt
16 hours, which is comparable to the previous forecast cycle.

17 All of these scenarios suggest that the IEPR
18 forecast is not a single forecast, but actually a set of
19 forecasts. Peak energy and hourly forecasts, they're all
20 consistent but distinct products. The different baseline
21 and AAEE scenarios apply to each. And our peak forecast
22 even has different variants to account for extreme weather.

23 All of these projections have been docketed along
24 with a notice of availability, which describes the complete
25 set of forecasting considered today for adoption. The

1 appropriate selection of a baseline scenario, weather
2 variant, and AAEE scenario from among the entire set
3 depends on the specific use case.

4 There is an agreement between leadership at the
5 Energy Commission, the Public Utilities Commission and the
6 California ISO, known as the Single Forecast Set Agreement,
7 which describes the current commitments at each
8 organization to use a particular forecast for particular
9 planning purposes. That agreement has been updated and
10 will be memorialized in the text of the 2019 IEPR.

11 So our forecast is developed within a public
12 vetting process. We held three IEPR workshops last year
13 presenting and soliciting stakeholder input on our inputs
14 and assumptions, on our preliminary forecast results, and
15 on our revised forecast. We also held a number of demand
16 analysis working group meetings to discuss specific
17 technical elements of the forecast and to review forecast
18 results in more detail.

19 We routinely engage with JASC. This is a joint
20 organization working group promoting coordination between
21 the IEPR forecast and its dependent processes at the CPUC
22 and ISO.

23 Many of the formal comments that we received
24 after a final workshop were forward looking. Any comments
25 that we felt were not ready for inclusion in CED 2019 will

1 be considered again this coming cycle as part of our work
2 planning.

3 We did make two adjustments to our forecast
4 following our December workshop. A number of stakeholders
5 noted that our behind- the-meter storage capacities
6 appeared low relative to currently known interconnections.
7 The CPUC was able to provide us with a supplemental data
8 set in time for us to adjust our storage forecast. We also
9 made an upward adjustment to our initial 2019 weather
10 normalized peak estimates in response to formal comments
11 from the ISO and after additional informal discussion with
12 CPUC and the IOUs.

13 The adjustment brings our 2019 normalized peak
14 estimates closer to the 2018 normalized peaks, which were
15 the starting point for our peak forecast last cycle.

16 When we produce a forecast, we also like to issue
17 a forecast report to memorialize all the inputs, methods
18 and results that we spent the previous year discussing. We
19 also plan to publish a staff white paper, a companion piece
20 to the exploratory fuel substitution analysis presented at
21 our December 2nd workshop. While the analysis is not part
22 of this forecast, we hope that it will engage stakeholders
23 in additional discussion and analytic work that will inform
24 future forecasts.

25 2020 will be an update year, which typically

1 means the forecast will have a narrower scope. Fewer model
2 runs means more time and staff resources will be devoted to
3 improving our process.

4 Staff discussed with stakeholders this year the
5 concept of an open request window. During the February and
6 March timeframe we will be asking stakeholders to identify
7 planning needs that could be served or perhaps better
8 served by the forecast. And also to help us determine
9 which of these needs represent changes the Energy
10 Commission can and should pursue.

11 This is the last of my slides. I should mention
12 now that there will be some activity on the IEPR Demand
13 Forecast Docket later today. We'll be posting an amended
14 version of our 1.1(c) forms. These are the tables that
15 allocate our planning area sales forecasts to individual
16 load-serving entities. On an earlier published version of
17 the form, the IOU bundled line items mistakenly included
18 some CCA and direct access customers. But this is an
19 easily corrected allocation error and does not affect the
20 overall forecast that we're asking you to adopt today.

21 Lastly, I'd like to thank all of our staff who
22 supported this forecast, particularly our Assessments
23 Division and our incredible IEPR team. And our very
24 recently retired Chief Forecaster, Chris Kavalec. I'd like
25 to thank our stakeholders who are consistently engaged in

23

1 this year-long process and who provided valuable feedback
2 along the way.

3 And with that I'll conclude by recommending that
4 the Commission adopt the California Energy Demand 2020 to
5 2030 forecast.

6 CHAIR HOCHSCHILD: Great. Thank you.

7 Commissioner McAllister? We do have some public
8 comments. Did you want to say anything first or ask any
9 questions or should I do the public comments card? Yeah.
10 We do have one public comment from Delphine Hou. Are you
11 here? Delphine, come on up.

12 MS. HOU: Good morning. This is Delphine from
13 the California ISO. Chair and Commissioners, I just wanted
14 to express the thanks from the California ISO for the
15 fantastic work that the CEC team has done.

16 As Nick mentioned, we use a single forecast set
17 for some of our very core processes, our transmission
18 planning process, our local capacity, our flexible capacity
19 and all of that is to ensure that we have what we need in
20 order to operate the grid reliably as we integrate
21 renewables.

22 I can't say enough for this fantastic team, so
23 I'll do a quick shout out to Nick, Cary, Wynn Sedocra,
24 (phonetic) Ingrid, Mike, Matt, Alicia and of course Siva.
25 And there's more that I'm missing, completely my fault. We

24

1 really want to express our gratitude for the staff who've
2 been working very hard especially with Chris Kavalec's
3 departure, this being a full IEPR year, so there was a lot
4 to do. And they took on additional tasks as they saw fit.

5 In addition to that they were very open and
6 receptive to our feedback and our comments. And we really
7 do feel like this is an excellent work product. So thank
8 you very much. We very much appreciate it and we're
9 looking forward to using the single forecast set and
10 working with everyone in the future. Thank you.

11 CHAIR HOCHSCHILD: Well, we really appreciate
12 that, Delphine. It's great to see interagency
13 collaboration. We really appreciate your collaborative
14 spirit as well.

15 Are there any other public comments in the room
16 or on the phone? Hearing none, Commissioner McAllister.

17 COMMISSIONER MCALLISTER: Yeah, so I won't repeat
18 what Delphine said, because that's pretty much what I was
19 going to say. But so it's great to see that coming from
20 stakeholders. But really it's a tremendous effort with a
21 large staff that's highly capable. And really some of the
22 best analysts that we have in the state on these issues.
23 And that's because it's super important work.

24 And I guess I certainly wanted to thank Nick and
25 Siva and the team and Cary for sort of bifurcating Chris

1 and moving along. And Chris himself who you know obviously
2 has been at this for a long time and I think created a
3 culture that is continuing on, which is one of responsible
4 planning.

5 I wanted to thank the ISO and the PUC and really
6 just maybe frame this work as a platform for collaboration
7 as much as for development of the forecast. Because the
8 interagency discussion itself is incredibly valuable for us
9 to understand the sort of pressures and needs and roles and
10 responsibilities of each of our respective agencies. And
11 so that triangulation that happens sort of on a consistent,
12 constant basis during the development of the forecast is
13 critical to getting to the right place and to making sure
14 that everyone's informed.

15 And so when things come up we've all got -- staff
16 across agencies all have an understanding of the context.
17 And if there's an issue with a particular load pocket or a
18 particular power plant or whatever, with markets, we can
19 tune in to what's going on quickly and sort of have a
20 common understanding relatively effectively.

21 And that's incredibly important for reliability
22 in real time, really. And so I think the relationships
23 that develop because of the forecast have a much broader
24 relevance and importance.

25 And I would just add a couple of things.

1 Probably the thing that Nick you talked about the most was
2 the AAEE. And that's because it's arguably the most
3 complex piece of the forecast. And it reflects that fact
4 that we know energy efficiency is incredibly important. We
5 know it's actually going to be more important going forward
6 for a clean energy future. The demand side has to be a key
7 part of the solution for integrated renewables and load
8 flexibility is really key. And so we're kind of moving that
9 discussion in a much more sophisticated direction. And
10 that's going to continue. And so I think the resources
11 we're bringing to that are very well invested.

12 And then so as you said this is a full forecast.
13 And next year is not a full forecast. And I think the goal
14 there is to minimize the complexity as much as we can, so
15 that we have the luxury of some methodology discussions
16 going forward. And so just to point out to my colleagues
17 there will be some interesting thinking going on about how
18 the forecast should evolve, how it can use data better.
19 You know, we've been talking a lot about data. How it can
20 be more localized. How it can really embrace demand
21 shapes, fuel switching, all of our fuel substitutions
22 rather.

23 And so I think there are these topics of long
24 relevance, long-term relevance that we're really kind of
25 grappling with, but I think starting to get a handle on.

1 And that's really important for the forecast. And I want
2 to just applaud Siva and the whole team for -- Mike Jaske
3 is doing some interesting work. I think there's a lot of
4 quality thinking going on there. We're going to need
5 stakeholders to really step it up as well. So that's
6 what's coming on in 2020 and I've very excited about that
7 discussion, because it's super interesting. Certainly a
8 little bit technical, but also extremely important.

9 So with that I think I won't recapitulate the
10 forecast itself. I think it's a great product. I want to
11 again thank the PUC and the ISO for just that iteration.
12 And that kind of self-correction that's part of the system
13 now I think, part of the relationships that we have. And
14 the utilities for bringing their data and pointing out
15 where they think there are inconsistencies and all the
16 other stakeholders for suggesting different topics and
17 themes going forward.

18 I think it's an incredibly valuable enterprise.
19 And obviously we have to do it, but I think the reason we
20 do it is much broader than statutory obligation. It's
21 because it really helps the state get to where we need to
22 go.

23 So with that I'll wrap it up. So thanks for
24 indulging me.

25 VICE CHAIR SCOTT: Can I just add also my thanks

1 to Commissioner McAllister for his leadership and taking
2 this on and really being down in the weeds on a lot of
3 these topics. I appreciate that very much.

4 This is such a robust and transparent process.
5 So Nick I really appreciate you kind of highlighting the
6 stakeholder process that we went through. And Commissioner
7 McAllister has expressed just the value that we get in both
8 having a fantastic energy demand forecast, but also the
9 relationships that it builds and really thinking through
10 some of these critical issues for the state.

11 I appreciate very much also the collaboration
12 with our sister agencies. And really what we've done is
13 we've built the foundational information for the state's
14 energy planning, right? And that's kind of what we do
15 every other year. And then update it, tweak it in the
16 interim.

17 And it's getting much more complex, as
18 Commissioner McAllister mentioned. We've got lots more
19 data that we have and we need to think through what to do
20 with that, how to use it smartly, which data helps inform
21 things for us to make better and better decisions. We're
22 including increasing granularity into our forecasting,
23 which is also very important. And then there's just ton of
24 more complexities in the system, right, like load
25 management which we had a workshop on earlier. There are

29

1 things like electric vehicles, which are sometimes demand
2 and sometimes supply, right?

3 And so there's a lot of things that are changing
4 and it's all changing very rapidly. So being able to
5 capture that in the thoughtful and smart way that our
6 forecasting team does is really fantastic. So I just
7 wanted to kind of pile on there.

8 CHAIR HOCHSCHILD: Make a motion?

9 COMMISSIONER MCALLISTER: Okay, I'll move this
10 item.

11 CHAIR HOCHSCHILD: Is there a second?

12 VICE CHAIR SCOTT: I'll second.

13 CHAIR HOCHSCHILD: All in favor say aye.

14 (Ayes.)

15 CHAIR HOCHSCHILD: That motion passes
16 unanimously. Thank you.

17 COMMISSIONER MCALLISTER: Thanks Nick

18 CHAIR HOCHSCHILD: Let's move on to Item 6,
19 Trinity Public Utility District.

20 MR. MOUA: Thank you and good morning Chair, Vice
21 Chair and Commissioners. My name is Cheng Moua. I'm with
22 the Building Standards Office of the Efficiency Division.
23 With me is Mazi Shirakh and Jacqueline Moore from the Chief
24 Counsel's Office.

25 Trinity Public Utility District is submitting an

1 application package which is our first application for a
2 solar PV system requirement determination regarding whether
3 the new PV requirement in the 2019 Building Energy
4 Efficiency Standards should apply to its service area.

5 This item was presented at the October 2019
6 Business Meeting where the Commission requested that staff
7 further document the analysis that was performed in the
8 findings and allow the public an opportunity to comment
9 before voting on the item. Staff has since prepared a
10 report detailing the analysis that was completed and posted
11 on the Commission's website allowing a 15-day public
12 comment period. No comments were received during this
13 period.

14 As a recap, and to provide background, the Energy
15 Commission adopted the 2019 standards, which requires
16 rooftop solar PV on all newly constructed low-rise
17 residential buildings. The 2019 standards became effective
18 on January 1st, 2020.

19 As part of the adoption, Section 10-109(k) titled
20 "Photovoltaic System Requirement Determination" states that
21 the Commission may upon written application or its own
22 motion determine that the PV requirement should not apply
23 to particular buildings if the Commission finds that the
24 implementation of public agency rules regarding utility
25 system costs and revenue requirements, the compensation for

1 customer-owned generation, or the interconnection fees
2 causes the Commission's cost effectiveness conclusions to
3 not hold. This ensures that the solar PV requirements
4 apply where they are cost effective, consistent with the
5 Public Resource Code.

6 Trinity Public Utility District conducted a
7 public hearing and approved a decision to seek the
8 determination from the Commission submitting an application
9 under 10-109(k). Trinity Public Utility District serves
10 most of Trinity County, servicing approximately 7,200
11 customers. Trinity distributes and sells 100 percent
12 hydropower and splits its territory into two geographic
13 zones, providing its customers with energy rates of 5.5
14 cents and 7.8 cents per kilowatt-hour.

15 Trinity acknowledges the Commission's ambitious
16 goals. However it proposes that its energy rates are much
17 lower than those used by the Energy Commission when
18 determining the cost effectiveness of the PV requirement
19 and that their low rates make solar PV not cost effective.

20 Staff made the application available to the
21 public for a 60-day public comment period. Two comments
22 were received during that period and were taken into
23 consideration. Staff reviewed the application and
24 performed the life cycle cost analysis using the same
25 approach used during the development of the solar PV

1 requirement to determine if Trinity's agency rules would
2 cause PV to not be cost effective.

3 Staff found that applying both Trinity energy
4 rates and the net energy meeting rules for the analysis
5 resulted in the solar PV requirement to indeed not be cost
6 effective. Results showed that the electric bill savings
7 during the generated over having PV were less than the
8 solar PV system costs, having the benefit to cost ratio of
9 less than one. This is the analysis that was detailed in
10 the report.

11 For this reason staff recommends the Commission
12 to approve the resolution determining that the solar PV
13 requirement in the 2019 standards for newly constructed
14 low-rise residential buildings not apply to Trinity Public
15 Utility District service area.

16 We're here to answer any questions as well as
17 Paul Hauser from Trinity. Thank you.

18 CHAIR HOCHSCHILD: Do we want to have comments
19 from Paul?

20 COMMISSIONER MCALLISTER: Yeah, if Trinity wants
21 to have some comments that'd be great. Appreciate your
22 being here.

23 MR. HAUSER: Thank you, Commission. Paul Hauser,
24 I'm the general manager for Trinity PUD. There's also a
25 couple of other folks that are here with me that are

1 familiar with the building industry and Trinity County.

2 We were here in October. Thanks for having us
3 back again. It's been a lengthy process, but I do want to
4 complement your staff on a really thorough and conservative
5 cost effectiveness analysis. I would be happy to answer
6 any specific questions you have relative to Trinity PUD.

7 It was mentioned by staff, but I think it's an
8 important reminder also that we are 100 percent carbon
9 free. We applaud the Commission's efforts to decarbonize
10 the electric grid. You might not realize it, but since
11 Trinity PUD's inception in 1982 we have always every
12 kilowatt hour we've sold has been 100 percent carbon free.
13 So we applaud that. We're actively trying to move folks
14 from propane in our area to our electric. And we'd be
15 happy to answer any questions that you have.

16 Joanne Harper and Wes Scribner would also like to
17 say a few words on (indiscernible).

18 CHAIR HOCHSCHILD: Absolutely. Thanks for coming
19 again. I know it's been a bit of a long process. Yeah, go
20 ahead.

21 MR. SCRIBNER: Thanks for having us here today.
22 As Paul had mentioned, my name is Wes Scribner. I'm a
23 Civil Engineer and General Contractor. I managed our water
24 utility up in Weaverville for eight years. I worked for
25 the Department of Transportation. And being such a small

1 community you're really in touch with everything and it
2 takes kind of a whole village to keep everything going.

3 I've been talking to Paul and our PUD about this
4 coming up too, because we're pretty in tune to the
5 construction industry up there. I started in construction
6 at the age of 10. My family has had a business up there
7 for years. And probably one of the largest contractors in
8 Trinity County, which is not much bragging rights.

9 The rooftop solar, my fear is becoming the straw
10 that breaks the camel's back, because we're such a
11 disadvantaged community you gets real in tune with just the
12 dire need for housing and the bare minimum margins when
13 people are constructing homes. And I would even go so far
14 as to say housing. It's really we've got a modest
15 community up there, modest pay and modest housing. And
16 this kind of pushes us over the limit to the point where
17 it's going to have a negative impact on our development.

18 The last point I'd like to make is that I know
19 that there's a concern about setting a precedent here in
20 California. I see this exemption not really as a
21 precedent, but more of a focus of our efforts.

22 Like Paul had mentioned we already have a no
23 carbon footprint with our power. What would be the point
24 of us trying to pull resources away from other areas of the
25 state that do need that development and put them up there

1 into the mountains?

2 It's tough for us to get construction resources
3 up there. People don't want to drive up. In turn it's
4 pretty expensive, so construction is challenging up in
5 these rural areas. And so I appreciate your consideration
6 for this exemption. It may or may not be a big decision
7 for you guys, but just know that tucked away in these rural
8 communities that these decisions to make a pretty
9 significant impact for the people that do live here. Thank
10 you.

11 CHAIR HOCHSCHILD: Thank you.

12 Go ahead, ma'am.

13 MS. HARPER: Good morning. Thank you for this
14 opportunity to speak as a concerned involved Trinity County
15 resident. My name is Joanne Harper. And I moved to
16 Trinity County from Sacramento 20 years ago. My husband
17 and I both graduated from UC Berkeley in the late '80s and
18 very conscientiously chose Trinity County as the place we
19 wanted to raise our family.

20 The fact that TPUD, our local utility district,
21 receives 100 percent carbon-free electricity from hydro
22 power was one of the many incentives for us to move to
23 Trinity County.

24 I am also a California licensed architect with
25 one of my main job responsibilities being the provision of

1 energy calculations to fellow residents. To date, I've
2 prepared over 300 sets of energy calcs and I take this job
3 very seriously. Our county is the poorest in the entire
4 state as I understand it. Therefore it's especially
5 important to be aware of the balance of residential
6 construction costs in Climate Zone 16, which is the most
7 extreme of climate zones, extreme heat, extreme cold, while
8 being aware of building efficiency.

9 I do take it very seriously with great concern
10 for my children's and grandchildren's future on the planet
11 and respect for the visionary strides that the state of
12 California continually make.

13 Additionally, I've taken many classes on the
14 changes from the 2016 to the 2019 codes as well as studied
15 the documents provided over the course of the last year on
16 the topic of TPUD exemption from solar rooftop mandates.
17 After much research and consideration and compassion for my
18 fellow 7,200 Trinity County TPUD customers I stand before
19 you urging you to reflect upon the staff review paper from
20 CEC, dated December 2019, as well as the December 17, 2019
21 letter from Assemblymember Jim Wood.

22 TPUD provides 100 percent carbon free electricity
23 from hydro power and has since 1982. How great is that?
24 There's no other county in the state with this situation,
25 yet we are so small and underprivileged we get lumped in

1 with all the other electric utilities throughout the state
2 that actually do have quite a carbon footprint requiring
3 negating. Trinity County does not.

4 The double whammy of being the poorest county in
5 addition to the toughest climate extremes creates an
6 exceptional challenge to folks wanting to build new homes
7 here. It's very difficult for residents of Trinity County
8 to build. We have a rather drastic housing shortage,
9 because of this.

10 The mission of the CEC is to reduce the
11 California carbon footprint, a concept that I fully
12 support. Trinity County has been accomplishing exceptional
13 strides in this regard for nearly 40 years with innovative,
14 reliable hydropower. It simply does not make sense for our
15 TPUD residents to install solar panels. Our electricity
16 intrinsically is green. The argument that I've read about
17 this being a precedent to other counties simply doesn't
18 have weight, because there's absolutely no other county in
19 our situation. We're small. We're exceptional. And we
20 are doing above and beyond our part to have minimal carbon
21 foot print.

22 Our county does have many homeowners that are off
23 the grid. They simply cannot be served by TPUD. I've
24 prepared dozens of energy calcs for these residents and all
25 do have solar panels. It gives me such pride to know that

1 our small county accomplishes all that the latest strides
2 in energy efficiency that you're shooting for. Our TPUD-
3 served property owners are 100 percent carbon free with
4 hydropower. And the other property owners off the grid are
5 solar powered.

6 In summary, it clearly doesn't make sense for
7 property owners in the TPUD District to install solar
8 panels. We are fully aware of the environmental impact.
9 And a rooftop solar mandate in Trinity County does
10 absolutely nothing to help our environment while only
11 increasing the building costs to a severely economically-
12 disadvantaged community with a housing shortage to boot.

13 Thank you for listening. And I do urge you to
14 respect our small county of great people that have been
15 pioneers in minimizing our environmental impact for
16 decades. Thank you.

17 CHAIR HOCHSCHILD: Thank you.

18 Is there any other public comments either in the
19 room or on the phone? Hearing none, Commissioner
20 McAllister.

21 COMMISSIONER MCALLISTER: Yeah, thanks everybody
22 for being here. And I want to actually just ask maybe a
23 clarification from Paul. I understand that the 5.5 and 7.8
24 cents kind of is all going to go down to 5.5 at some point
25 as the bond gets paid off and you guys sort of revert back?

1 So I mean, the overall cost is going to be even lower than
2 was represented now going forward into the future.

3 So I really appreciate everyone's effort on this,
4 because I think it was very important to establish a
5 process. I mean that's the conversation that we had in
6 October was the merits seemed to be there, but it's
7 important enough because it's the first and we want to make
8 sure we get this process right and give everyone a chance
9 to look at it and comment on it. It sounds like that went
10 through in a fairly uncontroversial way.

11 And really just I think the reassurance that I
12 can give to folks that are visiting from Trinity, is I
13 really appreciate your comments is that this is exactly
14 what we set out to do when we framed the building
15 standards. Where we did a calculation that showed cost
16 effectiveness on average, reasonably robustly, very
17 robustly across the state, but we knew there would be
18 exceptions. And we wanted to encourage those exceptions to
19 come forward if they felt necessary. So that's what's
20 happening. And then first one and this is exactly the way
21 we thought about it.

22 And in fact that's what stakeholders, the broad
23 group of stakeholders had suggested and we took those
24 recommendations in the development of the rulemaking
25 package. So I feel like at this point it's

1 straightforward. We have WAPA Power that's cheap. It's
2 going to be cheap. And that community has made the case
3 that they need to make. And we've vetted it and it's
4 clear.

5 So I support this item.

6 CHAIR HOCHSCHILD: Yeah. The only thing I'd add
7 just statewide we did just get the new estimates that we're
8 now at 57 percent carbon free electricity as a state. So
9 36 percent renewables, 13 percent large hydrate percent
10 Diablo Canyon and just an important point --

11 COMMISSIONER MCALLISTER: Yeah.

12 CHAIR HOCHSCHILD: -- that we are over the
13 tipping point and fossil is now the alternative energy, so
14 we have -- go ahead.

15 COMMISSIONER MCALLISTER: I guess the only other
16 thing I would add is I certainly appreciate Trinity's
17 situation in that it's already 100 percent hydro.

18 The conversation that we had in the development
19 of the rulemaking, I think it's just worth saying -- it's
20 not exactly in rebuttal, but solar -- in many places where
21 solar -- it doesn't have to be as expensive as in the IOU-
22 serviced territories to be cost effective. And it doesn't
23 have to negatively impact build ability when you have a
24 mortgage. Now many people don't have a mortgage. And I
25 think those edges we have to really think about. But we

41

1 showed very clearly that solar is cost effective when it is
2 part of a financed construction. Because of the cash flow
3 that results from it in sort of the typical net metering
4 arrangement at the typical utility.

5 Now Trinity is not the typical utility and that's
6 the conversation we're having right now. But I do think
7 that the conversation about housing affordability and
8 solar's impact on it is often kind of misunderstood. So I
9 think we need to just keep that note -- we need to make
10 sure we're educating the public about that as well going
11 forward.

12 But with that, I strongly support this item.

13 COMMISSIONER DOUGLAS: So if I could, I was just
14 going to make a brief comment as well.

15 You know, when we adopted the solar requirements
16 in the 2109 standards the Energy Commission very
17 consciously added not only the new prescriptive
18 requirements for furthering the state's goals of ensuring
19 that the newly-constructed residential buildings would have
20 solar. But we also put in place exemptions and a process
21 for applying for exemptions when that requirement was not
22 feasible or was not cost effective. And we fully expected
23 that some utilities or some areas would come forward with a
24 rationale that could be articulated and analyzed and
25 understood. And I think Trinity has met that burden in

1 this case.

2 And I appreciate staff's hard work and rigorous
3 work with Trinity to put forth the factual basis that we
4 can all consider as we look at this item. So I think the
5 work here was well done and I do understand that the folks
6 from Trinity had to come here twice and I'm sorry about
7 that.

8 But I also do appreciate Commissioner
9 McAllister's request that we just ensure that we have a
10 fully transparent and public process and a fully-vetted
11 item to consider today. So we are sorry about the second
12 trip, but I think it's a solid item and I think it's well
13 done. So I'm in support of this.

14 CHAIR HOCHSCHILD: Vice Chair Scott?

15 VICE CHAIR SCOTT: Yeah, I have to actually
16 really echo many of the things that you just heard from
17 Commissioner McAllister and from Commissioner Douglas. I
18 also want to thank the folks from Trinity for being here
19 again today. We appreciate you making the trip.

20 I know that perhaps this first round didn't go
21 quite as smoothly as everyone might have liked, but as the
22 Public Member for the Commission it's so important that we
23 have a good process and that folks understand what we're up
24 to. And that the easily-accessible report that the staff
25 put together that everyone can have a chance to look at and

43

1 not have to cobble pieces from different places. I know
2 the information was there, but might have not been in an
3 as-easily accessible format.

4 It's just really important, so I also appreciate
5 the great work that has been done.

6 CHAIR HOCHSCHILD: Okay. Is there a motion?

7 COMMISSIONER MCALLISTER: Yeah. I'll move this
8 item.

9 CHAIR HOCHSCHILD: Is there a second?

10 COMMISSIONER DOUGLAS: Second.

11 CHAIR HOCHSCHILD: All in favor say aye.

12 (Ayes.)

13 CHAIR HOCHSCHILD: That motion passes
14 unanimously. Thank you.

15 MR. HAUSER: Thank you.

16 COMMISSIONER MCALLISTER: Thanks, everybody.

17 CHAIR HOCHSCHILD: Let's move on to Item 7, City
18 of Davis Local Ordinances Exceeding the 2019 Energy Code.

19 MR. STRAIT: All right, good morning Chair and
20 Commissioners. The California Public Resources Code
21 requires locally adopted building energy standards to
22 result in reduction of energy consumption levels compared
23 to the requirements of the California Energy Code. As a
24 consequence, in order for a local standard to be
25 enforceable, the local jurisdiction must file its

1 determination that the standards are cost effective with
2 the CEC. And the CEC must find the local standards will
3 require a reduction of energy consumption levels compared
4 to the statewide energy code.

5 The City of Davis has submitted an application
6 for its Ordinance Number 2565, which specifies the
7 following: first, mixed fuel single-family buildings shall
8 achieve a total energy design rating of 9.5; second, mixed
9 fuel low-rise multifamily buildings shall achieve an EDR of
10 10; and both types of mixed-fuel buildings shall be pre-
11 wired to allow the use of electric equipment for space
12 heating, water heating, cooking and clothes drying.

13 Staff posted the complete application, including
14 the local ordinance and adopted cost effectiveness
15 analysis, on the CEC's website under Docket Number 19-BSTD-
16 06 for a mandatory 60-day public review period on November
17 13th, 2109. No public comments were received specific to
18 the date of this ordinance.

19 Staff also reviewed the application to determine
20 whether the standards will require the reduction of energy
21 consumption levels permitted by the 2019 Energy Code, per
22 the requirements in the Public Resources Code. Staff found
23 that the standards will reduce the amount of energy
24 consumed and will not lead to increases in energy
25 consumption inconsistent with state law.

1 Staff further confirmed that the City of Davis
2 publicly adopt a finding of cost effectiveness for its
3 standard. Because staff has found that the application
4 meets all the requirements of the Public Resources Code,
5 staff recommends approving the enforcement of the City of
6 Davis ordinance. I am available to answer any questions.
7 And Greg Mahoney from the City of Davis is also here.

8 CHAIR HOCHSCHILD: Great. Any questions?

9 COMMISSIONER MCALLISTER: No, let's ask for Greg.

10 CHAIR HOCHSCHILD: Okay. Let's go to Greg then.
11 Thank you.

12 MR. MAHONEY: Good morning, Chair and
13 Commissioners. My name is Greg Mahoney. I'm the Assistant
14 Director of Community Development Sustainability for the
15 City of Davis.

16 And the Reach Code ordinance before you is really
17 just a continuation of our existing energy policies in the
18 City of Davis. The only real difference is that we're not
19 requiring any additional energy efficiency measures for
20 all-electric homes as a way to incentivize all-electric
21 homes. And the city has a stated objective of carbon
22 neutrality for the community by 2040. So that's why we
23 included the pre-wiring for future electrical retrofits, so
24 we can convert to all-electric homes down the road.

25 And I'm happy to answer any questions.

1 CHAIR HOCHSCHILD: Great, well I just want to
2 thank you for being here and to point out this is actually
3 kind of a little milestone. Peter correct me if I'm wrong,
4 I believe this is the 100th Reach Code that we've approved
5 for local cities in California since I think 2000. So did
6 I have that right, Peter?

7 MR. STRAIT: Yes, I can confirm this is the 100th
8 local ordinance that has been approved for enforcement
9 through the Energy Commission.

10 CHAIR HOCHSCHILD: Some confetti and balloons
11 somewhere that -- (Laughter.)

12 COMMISSIONER MCALLISTER: We can shop that in.

13 CHAIR HOCHSCHILD: Again these decisions are made
14 at the local level. Our authority here is highly
15 prescribed. We're looking to see if it violates Title 24
16 in any way, and if you've considered costs, and if it meets
17 those two tests we approve everything. But just generally
18 we are heading, as a state per the Executive Order, towards
19 carbon neutrality by 2045. And we need local partners to
20 get there. I really want to thank you and your colleagues,
21 and all the leadership in the City of Davis for putting in
22 the work.

23 Commissioner McAllister, do you want to say
24 anything?

25 COMMISSIONER MCALLISTER: Yeah, thanks for those

47

1 comments. And how many of those were the City of Davis, of
2 the 100? (Laughter.)

3 MR. STRAIT: At least half. I don't have a good
4 count, but as a supervisor of the Standards Development
5 Unit within the Building Standards Office I can express my
6 own thanks, because it's another example of local
7 jurisdictions leading this charge in the sense that they're
8 paving the way for us to come behind with statewide
9 standards. They're taking the risks to do some of this
10 initial adoption, to put some of these ideas out in front
11 of the public and see whether they work.

12 And the City of Davis has been a reliable partner
13 in this. I think they've adopted under every code cycle
14 since 1998 or was it 2005, but they've been a regular
15 participant in this. And we wouldn't be where we are
16 without all of this local effort including the effort by
17 the City of Davis. So you have my thanks.

18 COMMISSIONER MCALLISTER: I also want to just
19 thank you, Greg, for your leadership. I mean just in the
20 CALBO context and being willing to step up and lead your
21 colleagues in the building departments across the state, I
22 think it's really tremendous. And you're just a voice that
23 people look to and respect. And I think the City of Davis
24 is positioned largely, because of your consistency and
25 longevity there. So I really appreciate it. And having

1 actually put myself through the building code and the
2 Building Department of Davis, I understand how rigorous you
3 and your team actually is. And I really grew to appreciate
4 that during the course of my own construction project.

5 But I think there's not a whole lot to add to
6 Peter's presentation and to Greg's comments. You know,
7 we're looking to prepare the ground.

8 CHAIR HOCHSCHILD: Is there any other public
9 comment either in the room or on the line?

10 COMMISSIONER MCALLISTER: Oh, sorry.

11 CHAIR HOCHSCHILD: Yeah, go ahead.

12 MS. CULLUM: I forgot to turn in the blue slip,
13 sorry. Lauren Cullum with the Sierra Club, California
14 representing 13 local chapters in California and half-a-
15 million members and supporters throughout the state. I'm
16 here to express our support for the Energy Commission's
17 approval of the Davis Reach Code today.

18 Reach codes such as this one are not just a key
19 measure to reduce our greenhouse gas emissions, but are
20 also critical to making housing more affordable, to lower
21 the costs of new construction, to reduce indoor and outdoor
22 air pollution and associated health and economic impacts.
23 And to make our communities safer and more resilient.

24 California must prioritize efforts to electrify
25 homes and buildings to achieve climate safety and

1 affordable housing goals and stop (indiscernible) our gas
2 dependency. So not only are we supportive of Energy
3 Commission approving these Reach codes, but we also urge
4 the Commission to consider more bold action and make the
5 Title 24 Building Energy Efficiency Standards in the 2022
6 Code Cycle explicitly focused on clean energy all-electric
7 new construction. The cost to achieve greenhouse gas
8 reduction goals will increase dramatically if we continue
9 to expand the gas system with new construction.

10 So please consider electrification not just as a
11 climate solution but an affordability solution in the 2022
12 Code Cycle. Thank you.

13 CHAIR HOCHSCHILD: Thank you.

14 Ms. Koraddi, Go ahead.

15 MS. KORADDI: Chair and Commissioners, Nikita
16 Koraddi with the Natural Resources Defense Council also
17 here in support. The local building code ordinance that
18 the City of Davis is seeking approval for today is an
19 example of California policy at its best.

20 California law authorizes local governments to adopt
21 local energy ordinances that exceed statewide code
22 requirements. In 2019 alone, 24 local governments from
23 Carlsbad to San Jose to Santa Rosa have exercised this
24 authority to adopt local codes that lead the way in clean
25 and affordable new construction.

1 The City of Davis has adopted this ordinance
2 after an extensive stakeholder process and determined that
3 the proposed standards are cost effective for customers.
4 The proposed ordinance encourages efficient all-electric
5 new construction, which dramatically reduces carbon
6 emission when powered by California's clean energy grid and
7 rooftop solar panels.

8 All-electric homes cost less to build than
9 conventional mixed-fuel homes and they save money on energy
10 bills. Davis's ordinance also allows mixed-fuel
11 construction with higher energy efficiency and pre-wiring
12 for future electrification.

13 This local democratic process is leading the way
14 for the state and the nation to fight climate change at a
15 time when the wildfires in Australia, the Amazon and closer
16 to home in California, are stark reminders that the climate
17 crisis is upon us and requires bold and urgent leadership.
18 The City of Davis is providing this bold leadership in a
19 way that will also reduce the cost of constructing new
20 homes and lower utility bills.

21 And for these reasons we urge your approval.
22 Thank you.

23 CHAIR HOCHSCHILD: Great. Thank you.

24 Any other public comments either in the room or
25 on the phone? Hearing none --

1 COMMISSIONER MCALLISTER: I actually have one
2 question for Greg.

3 CHAIR HOCHSCHILD: Go ahead.

4 COMMISSIONER MCALLISTER: Just now that we're
5 thinking about it, I think it would be good for us to do it
6 in a public sphere. So are you -- I know this would not be
7 in our vote here, but are you also promoting water
8 efficiency measures in the code?

9 MR. MAHONEY: Well, we adopt Tier One, so that's
10 a 12 percent increase in water efficiency above and beyond
11 CALGreen requirements.

12 COMMISSIONER MCALLISTER: Okay.

13 MR. MAHONEY: We also have a requirement in our
14 previous Reach Code where we require a receptacle at the
15 most remote outlet, fixture outlet, for future on-demand
16 re-circ pump. Because that was the biggest hurdle, was for
17 the on-demand was that they manufacture re-circ pumps that
18 all you have to is plug them in and connect them at the
19 most remote outlet. And the cost to have an electrician
20 come in and install the receptacle was often cost
21 prohibitive for people.

22 COMMISSIONER MCALLISTER: Okay, that rings true.
23 I guess I wanted to just commend you on that front too,
24 because I worked with the city in my project to do some
25 rainwater catchment tank and a grey water system just from

1 the ground up. And it was kind of new for all of us. And
2 I really appreciated your working with us through that
3 process. And it's working great.

4 MR. MAHONEY: Thank you, very good.

5 COMMISSIONER MCALLISTER: And it's saving a lot
6 of water, saving a lot of water. So anyway, I was curious
7 and wanted to ask what more you're doing.

8 But with that I'm very pleased to support this
9 item and I move Item 7.

10 CHAIR HOCHSCHILD: Is there a second?

11 COMMISSIONER DOUGLAS: Second.

12 CHAIR HOCHSCHILD: Second by Commissioner
13 Douglas. Let's take a vote. All in favor say aye.

14 (Ayes.)

15 CHAIR HOCHSCHILD: That motion passes
16 unanimously. Thank you.

17 MR. STRAIT: Thank you, Commissioners.

18 CHAIR HOCHSCHILD: Let's move on to Item 8, City
19 of San Leandro.

20 MR. SANDHU: Good morning Chair and
21 Commissioners. My name is Balraj Sandhu. I'm with the
22 Local Assistance and Finance Office in the Efficiency
23 Division. Today, I'm here to request your approval of the
24 proposed resolution for an Energy Conservation Assistance
25 Act loan for approximately \$1.3 million to the City of San

1 Leandro.

2 The measures at various city facilities will
3 include upgrades to the interior and exterior lighting,
4 heating ventilation and air conditioning, replacing
5 chillers and adding a variable frequency drive to the pool
6 water circulating pump at the Aquatic Center. The proposed
7 project is estimated to save approximately 550,000 kilowatt
8 hours and about \$113,000 annually.

9 We request your approval of this loan and I'm
10 happy to answer any questions you may have.

11 CHAIR HOCHSCHILD: Okay. Is there any public
12 comment on this item?

13 MR. SANDHU: None.

14 CHAIR HOCHSCHILD: In the room or on the phone?
15 Okay. Any questions?

16 COMMISSIONER MCALLISTER: No, I just want to
17 commend staff. I think the process is well-oiled at this
18 time. I appreciate the conversation, the presentation, and
19 I think that this is a good project. So thanks. So I'll
20 move Item 8.

21 CHAIR HOCHSCHILD: Great. Is there a second?

22 VICE CHAIR SCOTT: Second.

23 CHAIR HOCHSCHILD: Second by Vice Chair Scott.

24 All in favor say aye.

25 (Ayes.)

1 CHAIR HOCHSCHILD: That motion passes
2 unanimately. Thank you.

3 COMMISSIONER MCALLISTER: Thanks, Balraj.

4 MR. SANDHU: Thank you.

5 CHAIR HOCHSCHILD: Let's move on to Item 9, Rim
6 of the World Recreation and Park District.

7 MR. MICHEL: Good morning Chair and
8 Commissioners. My name is David Michel from the Local
9 Assistance and Finance Office within the Efficiency
10 Division. We are requesting your approval of a proposed
11 resolution for an Energy Conservation Assistance Act loan
12 for approximately 157,000 to Rim of the World Recreation
13 and Park District in Rimforest, California, in San
14 Bernardino County.

15 The project proposes upgrading its interior and
16 exterior lighting to LED and installation of solar PV
17 systems totaling 24 kilowatts at three locations. The
18 proposed project is estimated to save the district over
19 58,000 kilowatt hours and \$9,600 annually.

20 We are requesting your approval of the loan and
21 I'm prepared to answer your questions. Thank you.

22 CHAIR HOCHSCHILD: Thank you.

23 Are there any public comments on this item either
24 in the room or on the phone? Okay. Commissioner
25 McAllister.

1 COMMISSIONER MCALLISTER: It's great to see it
2 being used for a part district, so thanks for bringing that
3 to us. And no further comments. So anybody? All right,
4 so I'll move Item 9.

5 CHAIR HOCHSCHILD: Is there a second?

6 COMMISSIONER DOUGLAS: Second.

7 CHAIR HOCHSCHILD: All in favor say aye.

8 (Ayes.)

9 CHAIR HOCHSCHILD: That motion passes
10 unanimously.

11 MR. MICHEL: Thank you.

12 COMMISSIONER MCALLISTER: Thanks, Dave.

13 CHAIR HOCHSCHILD: Let's move on to Item 10,
14 Digital Energy, Incorporated.

15 MR. PFANNER: Good morning, Chair and
16 Commissioners. My name's Bill Pfanner. I'm the Acting
17 Office Manager for the Efficiency Division's Local
18 Assistance and Finance Office filling in today for Marites
19 Antonio. And we're seeking your approval of an agreement
20 with Digital Energy, Inc. for a \$2.1 million technical
21 assistance contract funded through the Energy Conservation
22 Assistance Act, also known as ECCA.

23 So the Technical Assistant Program dates back to
24 the 1980s. It consists of the Bright Schools Program and
25 the Energy Partnership Program. And Bright Schools serves

56

1 K through 12 public schools and Energy Partners Program
2 serve cities, counties and special districts.

3 The program provides public entities various
4 technical assistances that range from energy audits to
5 promote implementation of energy efficiency, feasibility
6 studies for PV systems, thermal and battery energy storage
7 and such. The program also offers professional engineering
8 support services such as energy project proposal review,
9 monitoring and evaluation of energy projects.

10 In May of 2019 the CEC released the RFQ
11 solicitation for the Bright Schools and the Energy
12 Partnership Program. The intent of the solicitation is to
13 select a single prime contractor that heads a team of
14 professional engineers and architects to assist and support
15 the CEC's Technical Assistance Program.

16 The CEC received eight statements of
17 qualifications of which the proposal from Digital Energy
18 scored the highest. And the \$2.1 million agreement will
19 secure services for three years for the Energy Commission.
20 And I would just note that Digital is the current contract
21 owner that we are working with presently and we're very
22 happy with their services. So I'd be happy to answer any
23 questions you might have.

24 CHAIR HOCHSCHILD: Great. Good to hear.

25 Is there any public comment either in the room or

1 on the phone?

2 Okay. Commissioner McAllister?

3 COMMISSIONER MCALLISTER: There's no
4 representative from Digital here?

5 MR. PFANNER: No.

6 COMMISSIONER MCALLISTER: There's no
7 representative from Digital, okay. Well, I think we've
8 been working with them for a while with good results, so I
9 think I'm happy with continuing the contract with them.

10 CHAIR HOCHSCHILD: A motion?

11 COMMISSIONER MCALLISTER: Yep, I will move Item
12 10.

13 CHAIR HOCHSCHILD: Is there a second?

14 VICE CHAIR SCOTT: Second.

15 CHAIR HOCHSCHILD: All in favor say aye.

16 (Ayes.)

17 CHAIR HOCHSCHILD: That passes unanimously.

18 Thank you.

19 Let's go on to Item 11, Renewable Energy for
20 Agricultural Program - Farmers' Fresh Mushrooms,
21 California.

22 MR. DODSON: All right, well good morning Chair,
23 Vice Chair and Commissioners. My name is Geoffrey Dodson
24 and I'm representing the Renewable Energy Division. I work
25 in the Technology and Incentives Office where we administer

58

1 incentive and grant programs promoting renewable energy
2 projects including the Renewable Energy for Agriculture
3 Program known by the acronym REAP.

4 We're here today to ask for your support to
5 approve the last of the 45 REAP grant awards resulting from
6 our program's first grant funding opportunity. And
7 additionally, as the last proposed aware we would like to
8 use this opportunity jut to provide a brief update of our
9 program.

10 So the REAP Program is part of the California
11 Climate Investments and is financed by the Greenhouse Gas
12 Reduction Fund. Accordingly, the key REAP project
13 objective is reducing greenhouse gas emissions.

14 REAP provides grant funding for renewable energy
15 projects, currently all solar PV system to serve
16 agriculture operations throughout California. The grants
17 range from \$25,000 to \$350,000 and funding can also include
18 optional equipment including EV chargers, battery storage,
19 and electric agriculture pumps that replace diesel pumps.
20 The photo before you here on the slide just shows a solar
21 array that was funded by our program and it currently
22 serves a walnut orchard.

23 As you may recall, we released our grant-funding
24 opportunity in January of 2019 and we received 98 grant
25 applications collectively requesting almost \$20 million in

59

1 grant funding. Out of the 98 applications, 45 renewable
2 energy projects were selected in April of 2019 totaling all
3 of our full funding amount available, which was \$9.5
4 million. The grant awardees provided \$5.5 million in match
5 funding. To date, 44 of these grant agreements have been
6 executed.

7 Currently, over 30 projects are in their build-
8 out phase right now. Two projects are finished and the
9 majority are expected to be completed in the first half of
10 this year. Some projects are waiting to start due to
11 various scheduling reasons such as availability of the
12 equipment installers and the equipment themselves, as well
13 as interconnection.

14 Since REAP is a new program serving busy farmers
15 whose main expertise is agriculture rather than filling out
16 paperwork, staff collaborated with key staff from other
17 officers including the Contracts, Grants and Loans Office,
18 our Legal Office, our Siting Office and our Public
19 Advisor's Office and our Internal Audit offices to develop
20 an innovative approach to our solicitation application and
21 review process and the management of the grant
22 applications. Many thanks to the key staff from these
23 offices.

24 This resulted in an oversubscribed grant program
25 and a streamlined, efficient management of the grant

1 projects. The implementation of these grant innovations
2 and our exceptional customer service represent the unique
3 programmatic qualities that REAP brings. These measures
4 are contributing to high stakeholder satisfaction and trust
5 in the program.

6 If today's grant agreement is approved the
7 collective impact of the 45 renewable energy projects will
8 include the addition of almost 7 megawatts of clean energy,
9 all serving on-site agriculture operations. Two-thirds of
10 our projects include the additional equipment funded
11 through the program, as shown here on the red, orange,
12 green and purple slices of the pie.

13 Over the lifespan of the installed equipment REAP
14 projects are estimated to reduce greenhouse gas emissions
15 by over 128000 metric tons of carbon dioxide or CO2
16 equivalent, which is comparable to burning 141 million
17 pounds of coal are taking over 27,000 cars off the road for
18 1 year.

19 Additionally, over half of our projects are
20 located in disadvantaged or low-income communities.
21 Several of which include direct benefits to these residents
22 like one of our grants with an entity that runs a farmer
23 training and education program for low-income residents.
24 The new solar PV system will directly reduce the
25 electricity costs for these low-income tenant farmers that

1 pay for their own use.

2 The location of the project's funded projects are
3 spread across the 18 counties throughout California,
4 concentrated in agriculture-rich counties and benefit 8 out
5 of the top 10 agriculture counties. The red dots here on
6 the map show you the exact project locations while the
7 green-colored counties indicate the total grant funds spent
8 in those counties.

9 Now that I have had an opportunity to provide a
10 brief program update I would like to move on to the
11 proposed grant agreement that we seek your approval on
12 today. The proposed grant agreement will be the final
13 grant agreement of the initial 45 awardees. The proposed
14 grant agreement with the Farmers' Fresh Mushrooms
15 California, Incorporated is for \$300,000 to install a 125
16 kilowatt solar PV system on the roof of their mushroom farm
17 growing operation in Colusa County.

18 Like all REAP projects, this project will
19 directly serve the onsite energy needs of the business and
20 will result in greenhouse gas reduction benefits. Staff
21 recommends the approval of this proposed agreement allowing
22 the opportunity to proceed with the agreement execution and
23 project implementation as such with our program
24 solicitation requirements.

25 And I thank you for your consideration and time

1 and I am here for any of your questions.

2 CHAIR HOCHSCHILD: Okay, let me just say, Geoff,
3 I really appreciate your diligence. I know you've worked
4 really hard on all aspects of this program. This is a
5 terrific program and I'm very proud, along with
6 Commissioner Douglas, just how quickly this program got put
7 together, got the money out the door. It's a win-win
8 saving money for the agricultural community, it's creating
9 jobs in the clean energy space and it's reducing our
10 emissions and building energy Independence. And
11 importantly, it has a good acronym. We have some truly
12 terrible acronyms in the state of California. REAP,
13 whoever -- was that you who came up with this or I forget
14 who did?

15 MR. DODSON: I think it was a team effort in our
16 office.

17 CHAIR HOCHSCHILD: A team effort, that's I think
18 maybe our best one. Is there any other public comment on
19 this item, either in the room or on the phone?

20 Hearing none, Commissioner Douglas?

21 COMMISSIONER DOUGLAS: I just wanted to briefly
22 acknowledge the hard work of staff and this is a great
23 program. I also wanted to say part of the reason why some
24 of the outreach was so effective was not only the staff's
25 hard work, but also coordinating with the Public Advisor's

63

1 Office. And so that's a really great way of working as a
2 team within the Energy Commission.

3 As has been noted, this is the 45th and final
4 award of the \$9.5 millionth, so I just wanted to make sure
5 that we acknowledged the great work on this program. And
6 with that I will move approval of the item.

7 CHAIR HOCHSCHILD: Actually, I had one question
8 when we designed this program just before we go to the
9 motion, which is when we designed this program we get this
10 feature where it's a larger Grant if the project includes
11 electric vehicle charging infrastructure. What portion of
12 the projects are including EV charging, roughly?

13 MR. DODSON: Let's see, from our pie chart that
14 we showed, I think it was 52 percent of our projects have
15 at least an EV charger. Some have EV charging plus other
16 equipment.

17 CHAIR HOCHSCHILD: Which is great, terrific.

18 Okay. There was a motion from Commissioner
19 Douglas, is there a second?

20 COMMISSIONER MONAHAN: Oh, can I ask a question
21 before?

22 CHAIR HOCHSCHILD: Oh, go ahead. Yeah, tell me.

23 COMMISSIONER MONAHAN: As a new Commissioner I
24 just don't just don't even know, but is it possible, I mean
25 now that we've distributed all the grants we won't hear

1 from you again. And I'm just wondering if there's an
2 opportunity during a Business Meeting for us to get like a
3 six-month progress report? Just because this is such an
4 amazing program and it would be great just to hear how
5 things are going as you actually get money out the door and
6 get these solar installations up and running. Is that
7 possible that we could get just like a update at a Business
8 Meeting?

9 CHAIR HOCHSCHILD: Sure.

10 MR. DODSON: Yeah, definitely as the projects are
11 implemented we'd be happy to.

12 CHAIR HOCHSCHILD: You know, the other thing that
13 I'd actually like to ask if we could work on this is I have
14 talked to Secretary Ross about doing a site visit together.
15 And anyone would be welcome to join that, certainly
16 Commissioner Douglas and I, to go see some of the most
17 successful projects?

18 MR. DODSON: Yes, definitely.

19 CHAIR HOCHSCHILD: Could you maybe draft an
20 agenda and run it by Commissioner Douglas?

21 MR. DODSON: Yes, and we're actually actively
22 working with her right now about that.

23 CHAIR HOCHSCHILD: Good. Yeah, yeah, great.
24 Great, okay. Thank you.

25 All right, any other comments or questions?

1 Okay.

2 COMMISSIONER DOUGLAS: So move approval.

3 CHAIR HOCHSCHILD: Commissioner Douglas, is there
4 a second?

5 COMMISSIONER MONAHAN: I second.

6 CHAIR HOCHSCHILD: Second from Commissioner
7 Monahan. All in favor say aye.

8 (Ayes.)

9 CHAIR HOCHSCHILD: That motion passes
10 unanimously. Let's move on to Item 12, California Clean
11 Energy Fund DBA CalCEF Ventures.

12 MS. OLIVER: Good afternoon Chair and
13 Commissioners. My name is Eleanor Oliver from the Energy
14 Research and Development Division.

15 I am here today to request approval of six awards
16 for \$450,000 each totaling in \$2.7 million from the EPIC
17 small grant program the CalSEED Initiative.

18 As you know, CalSEED provides small grants to
19 entrepreneurs with early-stage clean energy technologies.
20 Applicants first apply for a \$150,000 concept award, which
21 also comes with access to technical resources and business
22 development expertise. Those that successfully receive a
23 concept award are then eligible to compete for a 450,000
24 additional dollars to further develop their innovation.

25 The awards under consideration today are the

1 second round of those \$450,000 prototype awards.

2 The prototype awards are evaluated through a
3 business plan competition and awarded to CalSEED concept
4 award recipients who have shown the greatest technical and
5 commercial potential.

6 After being granted a concept award, recipients
7 went through a CalSEED Initiative sponsored curriculum to
8 complete a written business case package and prepare a
9 technology pitch. They pitched their cases to a panel of
10 judges who then evaluate both the written portion, an in-
11 person pitch for technical potential, environmental and
12 social impact, business strategy and the expertise and
13 experience of the team.

14 The second prototype award business plan
15 competition took place in August 2019 and the companies
16 with the top six scores are presented here for your
17 consideration today. Those companies are the Stasis Group,
18 Empow Lighting, Maxout Renewables, InPipe Energy, GenH and
19 SkyCool Systems.

20 The first company is Stasis Group, which is
21 developing a simple bolt-in ducted thermal energy storage
22 system that will integrate with HVAC systems to reduce
23 heating and cooling energy use. This innovation uses phase
24 change materials that can absorb heat in an active air
25 stream, which allows continuous cooling without operating

1 the condenser unit.

2 In addition to continual comfort this technology
3 aims to reduce the amount of energy required to condition
4 the spaces we live and work in by eliminating up to 40
5 percent of the peak heating and cooling load.

6 During the concept award the team was able to
7 demonstrate proof of concept on a lab scale. With the
8 prototype award the Stasis Group will continue lab testing
9 to fine tune the final prototype as a full-scale product,
10 do field installations to demonstrate real-world electric
11 cost savings and collect data that can facilitate future
12 steps towards commercialization.

13 The next company is Empow Lighting who has
14 developed a low-cost LED retrofit solution for linear
15 fluorescent fixtures that can enhance energy efficiency
16 light quality and aesthetics without requiring new or
17 additional training or rewiring. This innovation employs a
18 unique flexible thin sheet of film as an overlay to
19 fluorescent fixtures. This design can spread light into a
20 wide area and increase the useful light output.

21 Retrofitting with this technology will result up
22 to a 70 percent energy savings from lighting within
23 commercial buildings.

24 During the concept award Empow Lighting was able
25 to demonstrate the fluorescent to LED-to-retrofit concept

1 and develop a working prototype of a small-scale retrofit
2 panel. With the prototype award Empow Lighting will design
3 and fabricate full-scale prototypes in standard size
4 fluorescent troffers and validate the technology
5 performance.

6 The third company is Maxout Renewables who has
7 developed an all-in-one solar inverter called the Maxout
8 Polyverter that is inexpensive, failure resistant and more
9 effective at maximizing solar power output than commercial
10 inverters currently sold on the market.

11 The Maxout Polyverter innovates by combining
12 three previously separate devices: an inverter, optimizer,
13 and battery storage into a single system. This technology
14 decreases the cost of owning and maintaining a solar PV
15 system compared to its competitors.

16 During the concept award the Maxout Renewables
17 team were able to complete simulations that helped create a
18 baseline design of the technology system and escalate the
19 technology into a lab test for risk analysis. With the
20 prototype award, the team plans to finalize the prototype
21 and begin demonstrations for performance testing of the
22 complete system.

23 The next company is In Pipe Energy. This
24 company's technology is a pressure recovery valve renewable
25 energy generation system. This innovation combines smart

1 software controls, sensors and hardware components that
2 work in tandem with existing pressure-reducing valves to
3 generate renewable energy and precisely manage pressure in
4 water pipelines.

5 This technology has the ability to fit onto
6 existing pipeline infrastructure without adversely
7 impacting the effectiveness of water transmission. With
8 this system, loss energy associated with the pressure
9 reduction valves is captured and available for use.

10 During the concept award, InPipe did market
11 research to validate the value proposition of this
12 technology. From this market research, the team conducted
13 field visits to pressure control sites to significantly
14 advance its design and refine the technology capabilities.

15 With the prototype award, InPipe Energy will do a
16 field installation and demonstration at a California-based
17 water agency, which will help validate the technology
18 design and collect vital data on performance.

19 The fifth company is GenH who has developed a
20 mobile envelope dam electrification system. The innovation
21 consists of modular siphons moving upstream water up and
22 over a dam head into a set of modular turbines that quickly
23 electrified non-power dams and canals in weeks instead of
24 years.

25 This system generating capacity can be easily

1 scaled based on flow patterns and is designed to avoid
2 interactions with the dam, removing the need for costly
3 civil works in eliminating structural load analysis at the
4 site.

5 During the concept award GenH team did extensive
6 technology development with in-house performance
7 validation. The team also secured a primary test site for
8 demonstration and has optimized the system for commercial
9 dam deployment. With the prototype award the team will do
10 a final testing and fine-tuning of the system for a
11 demonstration at the test site.

12 The final company before you today is SkyCool
13 Systems. This innovation is a multi-layer optical coating
14 on Sky panels that enables a passive method for rooftop
15 cooling to increase the energy efficiency of a building.
16 These panels can cool without evaporating water and only
17 require minimal electricity to run a small circulating pump
18 within the system.

19 During the concept award the SkyCool team
20 completed an initial market research for the value
21 proposition of this technology within the data center space
22 and demonstrated the cooling ability of the panels in
23 similar operating conditions as a data center.

24 With the prototype award the team will integrate
25 with a modular data center to design and deploy a SkyCool

1 system for testing and collect data for the cooling
2 performance of the panels.

3 Thank you for your time and I am happy to answer
4 any questions you may have.

5 CHAIR HOCHSCHILD: Thank you.

6 We do have some public comments on this item, so
7 let's begin with Eli Goldstein.

8 MR. GOLDSTEIN: Hello, can you hear me?

9 CHAIR HOCHSCHILD: Yeah. Go ahead, Eli.

10 MR. GOLDSTEIN: Yeah, my name is Eli. I'm one of
11 the co-founders of SkyCool. I appreciate the opportunity
12 to have this grant. And yeah, we're excited to be in the
13 program. I'm happy to answer any questions that you guys
14 have.

15 CHAIR HOCHSCHILD: Any questions for Eli?

16 Okay. Thank you.

17 Let's move on to Joy Larson from CalSEED.

18 MS. LARSON: Hi there. I'm really excited to be
19 here. I am a Program Director for CalSEED Initiative at
20 New Energy Nexus. And this was a long competitive process
21 that these companies went through to get these awards.
22 Combining the expertise of our partner from Cleantech Open
23 as well as guidance from R&D at the CEC I think we have a
24 pretty strong rubric for evaluating these potential grants.

25 So I'd like to thank our partner, Cleantech Open

1 for their help in coordinating the competition and for
2 their expertise. And I need to also thank the specialists
3 on the Technical Advisory Committee for their
4 thoughtfulness and diligence in scoring all of these
5 projects.

6 On behalf of the CalSEED team at New Energy
7 Nexus, I'd like to also thank our colleagues at the CEC who
8 continue to collaborate with us: Josh Croft and Anthony Ng,
9 Eleanor Oliver and Erik Stokes.

10 The technologies that you saw Eleanor present are
11 really clever, but we also heard at the business plan
12 competition from these companies about how scaling their
13 technologies will increase access to renewable energy.
14 They'll create jobs. They'll lower electricity costs, and
15 they will enhance reliability of the grid.

16 The timing of these grants is really crucial for
17 these companies. You can see that these innovations are
18 kind of far out there a little, you know? They're pushing
19 the edges of technology and they need some de-risking
20 before they can scale. And so the timing of these
21 prototype awards, you saw that they're going to provide the
22 pilot projects, field installations, prototype development,
23 lab tests, certification testing and product optimization.

24 And so the timing of these awards for these
25 companies is absolutely crucial. And we are really happy

1 to be a part of the process and excited to recommend these
2 companies.

3 CHAIR HOCHSCHILD: That's great.

4 All right, Vice Chair Scott?

5 VICE CHAIR SCOTT: Yeah, I mean --

6 CHAIR HOCHSCHILD: Oh, no. Pardon me, we do have
7 two more. My mistake, David Frost from InPipe Energy.

8 MR. FROST: Good morning. Hi, I'm David Frost
9 from InPipe Energy. I'm here to speak in support of our
10 prototype award. I just want to say how much of a game
11 changer this is for our company.

12 For a long time you know the CEC has done
13 analysis and determined that 19 percent of California's
14 energy, about 1 in 5 kilowatt hours is water-related.
15 Principally moving and treating water.

16 Other CEC research has described the substantial
17 opportunity to recover carbon-free energy at the point of
18 delivery in pipelines. The challenge has been in
19 implementing these conduit hydro projects is we needed a
20 way to not complicate or impact the operation of water
21 agencies.

22 We're out there in the field speaking with water
23 agencies daily and these guys are tough. This is InPipe's
24 focus. You know, CalSEED has really made a difference and
25 our goal is commercializing a first-of-its-kind energy

1 recovery valve we call the In-PVR. (phonetic) The In-PRV
2 precisely meets the operating requirements of California
3 cities and water districts, but instead of wasting
4 potential green energy it produces it, essentially
5 converting wasted pressure to clean, reliable dispatchable
6 power. What could be more sustainable?

7 With the CalSEED Phase 1 grant we were able to
8 get out there and do market research. And we've identified
9 viable In-PRV sites throughout the state north and south,
10 and rural and urban locations and many types of water
11 infrastructure such as pumping stations, de-chlorination
12 sites, water recycling facilities.

13 The proposed grant is really critical for us in
14 terms of demonstrating our potential to economically
15 recover wasted pressure that can be converted to energy and
16 reduce the cost for California ratepayers in terms of
17 energy and water.

18 This will allow us to take the vital next step of
19 creating a critical case study that we need to support
20 broad adoption. The InPipe team would like to thank CEC
21 and also CalSEED and then the New Energy Nexus team.
22 They've been great to work with for this opportunity.

23 As Joy said finding a way to finance bridging the
24 gap from prototypes to product deployment is one of our
25 largest hurdles. We feel very lucky to be part of this

1 program, because this grant will enable us to bring our
2 innovation to California and the world. Thank you.

3 CHAIR HOCHSCHILD: Great. Thank you.

4 All right, Dr. Eric Cummings, MaxOut Renewables.

5 DR. CUMMINGS: Good morning. I was a scientist
6 at Sandia Labs and I left to start Maxout Renewables with
7 the aim of improving the reliability, resilience and
8 affordability of solar power.

9 And several years ago we came up with an
10 invention for a type of inverter that was highly
11 differentiated from the other ones that promised real
12 reliability improvements and cost savings. And we started
13 doing our own prototyping. We entered the Clean Tech Open.
14 We won it in energy development and we thought okay we'll
15 now go to the next step and do a convertible note or we'll
16 go to the private sector for funding. And we discovered
17 that there was no money, no money whatsoever for an early-
18 stage company in that field. You basically had to have
19 sales if you wanted to get any kind of investment.

20 So we were actually stuck for several years until
21 the CalSEED program and that has really made the
22 difference. It gave us the money to prove out the
23 technology, to de-risk it. The next phase will let us get
24 through field testing. And at that point we can actually
25 reach a strategic partnership with an inverter company,

76

1 which will get the product and the technology out there.

2 What CalSEED is doing is its unclogging a part of
3 the innovation pipeline that has been dead for ten years.
4 And you see it in the field. You see that inverters are
5 less expensive than they were, but it's because of
6 economies of scale and not technical innovation. The
7 reliability has not improved. It's stagnated. What's
8 needed is this kind of program to advance the technology,
9 so you can hit the kinds of targets that you have
10 aggressively set for yourself over the next few years.

11 Thank you very much.

12 CHAIR HOCHSCHILD: Great. Thank you.

13 Any other public comments either in the room or
14 on the phone?

15 Before I turn it over to Vice Chair Scott I did
16 have a question for Ms. Larson actually, which is just I'm
17 interested in the non-financial support you're able to
18 offer these guys in terms of introductions to technical
19 advisors and other investors and so forth. How else are
20 you incubating these winners?

21 MS. LARSON: You know, our partners at Cleantech
22 Open are really helping facilitate with putting together
23 kind of the nuts and bolts of their business plans. Our
24 partners at Momentum are partners with other programs at
25 New Energy Nexus, so also serve to connect all of the

1 entrepreneurs in CalSEED into a broader network.

2 We do host a quarterly investor connects night
3 that I encourage everybody to come to, where we target
4 different impact investors, VC, other kinds of corporates
5 to come in and see these companies pitch their ideas. And
6 we also offer a number of different pitch opportunities
7 where companies can come and kind of practice their
8 conversations and their pitch presentations.

9 CHAIR HOCHSCHILD: Great, good to hear.

10 Okay, Vice Chair Scott?

11 VICE CHAIR SCOTT: Well, this is great. It's all
12 very exciting. I just wanted to just take one step back,
13 because I'm not sure if Eleanor mentioned it in her
14 presentations. Just to remind you all that you know our
15 CalSEED program is the California Sustainable Energy
16 Entrepreneur Development Initiative. That one does also
17 have a really good acronym, just like REAP. (Laughter.)

18 And it's a \$24 million grant program overall and
19 it really is meant to help early-step California clean
20 energy startups to bring their concepts and prototypes to
21 market. And I think that you can hear from some of the
22 folks that spoke to you, and also from the awardees that
23 Eleanor has highlighted, that's exactly what it's doing.
24 So I'm really excited about that.

25 I also just wanted to mention how much I

1 appreciated Dr. Cummings' words. And also some of the
2 other awardees, because I think the EPIC team has been very
3 thoughtful and diligent in seeking out the areas in this
4 clean energy space where the EPIC funds can have the most
5 impact. And I think kind of hearing from folks, oh wow
6 this is really unlocking the pipeline that's been kind of
7 clogged up, is great to hear back from the real world.
8 Because they're thinking very much strategically about how
9 do we get those dollars into those kind of areas to really
10 unlock some of the innovations around California.

11 So I think we found a great way to do it through
12 CalSEED. And I think that we have selected a great set of
13 awardees as well, so I'm just excited about the EPIC funds
14 and how they're being utilized. And I think you have a
15 nice set before you.

16 CHAIR HOCHSCHILD: Any other comments or
17 questions from Commissioners?

18 VICE CHAIR SCOTT: I will move approval of Item
19 12.

20 CHAIR HOCHSCHILD: Okay. Thank you, is there a
21 second?

22 COMMISSIONER MONAHAN: Second.

23 CHAIR HOCHSCHILD: All in favor say aye.

24 (Ayes.)

25 CHAIR HOCHSCHILD: All right. Item 12 passes

1 unanimously. Congratulations to all of you and good luck.

2 Let's move on to Item 13, the minutes.

3 Okay, Commissioner McAllister is abstaining on
4 this vote. Is there a motion to approve the --

5 (Off mic colloquy.)

6 CHAIR HOCHSCHILD: Sorry, what's that?

7 COMMISSIONER DOUGLAS: All right, I move approval
8 of the minutes for December 11th.

9 VICE CHAIR SCOTT: Second.

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

11 (Ayes.)

12 CHAIR HOCHSCHILD: So that's a 4-0 vote.

13 Commissioner McAllister is abstaining. And then we have a
14 second vote, thank you, for -- do you want to make a motion
15 (indiscernible)?

16 COMMISSIONER DOUGLAS: Sure.

17 COMMISSIONER MONAHAN: Do I need to abstain for
18 the second one?

19 CHAIR HOCHSCHILD: Yes. You do, yes since you
20 weren't there for the whole thing.

21 COMMISSIONER DOUGLAS: You can.

22 CHAIR HOCHSCHILD: I think you should. Yeah, you
23 should.

24 COMMISSIONER DOUGLAS: You could have looked at
25 the transcript or otherwise satisfied yourself that the

1 minutes were correct. But okay, so I move approval of the
2 minutes for January 8th, 2020.

3 VICE CHAIR SCOTT: Second.

4 CHAIR HOCHSCHILD: All right, all in favor say
5 aye.

6 CHAIR HOCHSCHILD: With Commissioner Monahan
7 abstaining, that passes 4-0.

8 Let's move on to Item 14, Lead Commissioner
9 Reports. Commissioner Monahan, go ahead.

10 COMMISSIONER MONAHAN: Well we had our retreat,
11 which was great and I'm very sorry to have missed the
12 second day. But I missed the second day as you know,
13 because I went to China. And I was a speaker at a
14 conference that Janea spoke -- I'm sorry -- Vice Chair
15 Scott spoke at last year. EV100 which is kind of a
16 business coalition in China, but you know every business
17 coalition still has a link, I would say to the Chinese
18 government.

19 And it was a great conference. There was a lot
20 of international participants there, which made it a
21 dynamic conversation. When we had a breakout session that
22 was just around what different governments are doing, so we
23 were the only non-federal, non-national entity that was
24 represented. But Spain was there, the UK.

25 And the UK was especially interesting, because

1 the person who was there is also helping facilitate the
2 COP. (phonetic) And there's deep interest at the COP in
3 having transportation be one of the elements. And also in
4 having sub-national and potentially even cities represented
5 in this.

6 And I think this will be especially important to
7 given what's happening with the Trump Administration and
8 the rollback of vehicle standards, the loss of the federal
9 tax credit for Tesla and General Motors as they have
10 exceeded the cap. And no -- at least right now there's not
11 legislation actively that people are very positive about
12 moving forward to replace that, so it makes California and
13 what we're doing even more important. And I had numerous
14 discussions with the lead, Simon, for the COP around what
15 we could do in California and have followed up with Air
16 Resources Board on that. I need to follow up soon with the
17 Governor's Office on that as well.

18 And the others I've mentioned, Spain, they also
19 are interested in doing more partnerships with California
20 on particularly electric vehicles, but other aspects of
21 transportation. The Netherlands of course, Japan and
22 Norway were all represented.

23 So it was really interesting and fun to be like
24 my first sort of international foray as a California
25 government representative, so it was really fun.

1 And then after that I went with Energy Foundation
2 China and some other foundations in the climate space to
3 the lead city on renewable energy and hydrogen and fuel
4 cells. It's Zhangjiakou and it's also going to be the
5 location of the 2022 Olympics. And they're really trying
6 to showcase how to pair renewable energy with hydrogen
7 production and powering fuel cell vehicles. So they have
8 massive solar and wind farms that are being used to
9 generate hydrogen and we went and visited these facilities.

10 It was very cold. It was negative 20 degrees, so
11 I had to run out one night to a Uniqlo to buy some long
12 johns, because I really came under-prepared for how cold it
13 was.

14 But it was very inspiring and I will say that if
15 they're successful they're trying to get 1,500 fuel cell
16 buses in place this year or early next for all the Olympic
17 athletes. And it's all going to be powered by renewable
18 hydrogen, you know. And they're building out their bus
19 fleets, so if they're successful they could be using more
20 hydrogen in one city than we're using in the entire state
21 of California.

22 And we talked with the mayor of the city to
23 explore an MOU on this topic. And because I'm new to this
24 I'm trying to figure out how do we make sure -- you know, I
25 can't do anything without Governor's Office approval, so

1 starting that process. And hoping in the next several
2 months we'll have something more public to announce through
3 the California China Institute that is at UC Berkeley that
4 former Governor Brown has established.

5 So it was a really interesting trip and one of
6 the most important announcements. I mean China has been
7 historically half of the electric vehicle market. If you
8 look cumulative sales are definitely half, but last year
9 there was a big drop-off, a 46 percent drop in sales about.
10 We don't have end-of-year data. And the reason is because
11 they got rid of a tax -- I mean a credit for vehicles. And
12 they announced at EV100 they're going to be re-instituting
13 that for one more year to try to make sure the market is
14 really accelerated before they just use incentives and
15 other -- I mean more not fiscal incentives but other like
16 city policies, to help accelerate the EV market. As well
17 as a zero emission vehicle mandate that they modeled after
18 California.

19 So that was a pretty important announcement. I
20 mean I can't underestimate, like we cannot like undervalue
21 the importance of China to the global electric vehicle
22 market. Just like China helped to bring down prices of
23 solar, China is bringing down the price of battery
24 technology and so their market, the biggest market in the
25 entire world, it's important to make sure that they remain

1 in a leadership position on this. So that was a pretty
2 important announcement that we heard.

3 CHAIR HOCHSCHILD: Great. Thank you.
4 Commissioner McAllister?

5 COMMISSIONER MCALLISTER: All right, cool. So I
6 was not at the last Business Meeting, so a lot of great
7 stuff happened at that mentioned meeting. So I wanted to
8 just thank you for adopting the California Energy
9 Efficiency Action Plan. I'm very excited about that.
10 Sorry I wasn't here in person to vote for it, but it really
11 reflects a lot of work and a good direction forward. And
12 that sort of ties up a lot of the themes that we talk about
13 routinely with buildings and demand side efforts.

14 So let's see, and then I also wanted to just
15 acknowledge all the great work that's happening on Load
16 Management Standards, Karen Herter who's leading that on
17 our staff, and we had a great workshop opening sort of
18 kicking that off. There's a lot of positivism and optimism
19 about where that can go and working with our colleagues at
20 the other agencies, particularly the PUC. So I think
21 that's got a good path, a good trajectory forward.

22 Mostly I wanted to talk about the COP. The
23 reason I missed the last meeting was that I was actually at
24 the council parties (phonetic) and there was a group whilst
25 together representing California led by Secretaries

1 Blumenfeld and Crowfoot. They provided some great
2 leadership and really got our message out, and so it was
3 nice to sort of lock arms with our team and really taking
4 ownership of California's role and responsibility in this
5 global discussion, because it's real.
6 And I'll talk about a couple of things that sort of drove
7 that home for me.

8 And it was a whole team full of folks in the
9 private sector and other agencies and nonprofits. And so
10 it was a kind of good broad representation of California
11 and what we're doing in the climate across the board. The
12 big focus was on oceans and that was I think the equivalent
13 of what transportation might be for the next one. It kind
14 of was a an overarching theme, ocean health, but didn't
15 ignore all the energy and stuff that we do routinely in
16 this agency. But certainly there was a lot of a lot of
17 expertise floating around throughout the Convention Center
18 on oceans and coastal health.

19 The sponsorship of the COP actually was largely
20 provided through the Climate Action Reserve and the Climate
21 Registry. And so they sort of put together a whole team
22 that wasn't just California, but was nationwide. And so
23 they sponsored most of my trip and a couple dozen others
24 actually across the country, which was great. And part of
25 the reason I was there was representing NASEO and so sort

1 of speaking for not just California, but the other states.

2 And so I think there was a really good multi-
3 state, you know local and state jurisdiction conversation
4 and representation throughout the COP and that was great.
5 And US Climate Alliance was also very well represented and
6 so a lot of intersect between the Climate Registry and the
7 Climate Alliance states.

8 So it was really just kind of all hands on deck,
9 you know? States kind of really carrying -- you know,
10 states that are serious about climate and that have the
11 all-renewables policies and tend to really be pushing in
12 that direction alongside us. So it was a beehive of
13 activity and it seemed like there were always allies
14 popping up in any given any given event session-speaking
15 opportunity.

16 I want to just thank the Climate Registry and the
17 Climate Action Reserve for sponsoring. That's huge. It
18 really makes it happen for the states, makes it possible.

19 And then also kudos to the governments of Madrid
20 and of Chile, because I mean you all watched it happen
21 where Chile you know had some civil unrest and had to pull
22 their sponsorship and their hosting. But all of the
23 infrastructure they had built was just transferred
24 seamlessly over to Madrid. And so at any given event you'd
25 see a bunch of Chileans and a bunch of Madrileños working

87

1 together to make sure that it came off without a hitch and
2 it did.

3 It was an incredible event, super well-organized
4 and you wouldn't even have known that Madrid hadn't been
5 organizing this thing for the last year. And it was just a
6 very I think, just well done to everyone and acknowledge
7 what a feat they had pulled off, which was great.

8 So you know the news from the national level is -
9 - that discussion I think is moribund and was not
10 productive, did not succeed. And I think the US federal
11 government presence there most definitely meets those
12 criteria. But again it sort of just highlights the role of
13 the states and I think independent of that, of all national
14 overall discussion I think there's been over the last
15 decade a growing realization that sub-nationals are really
16 where it's at.

17 Not starting with Governor Brown, but certainly
18 with his leadership just (indiscernible) MOU and that
19 coalition and C40 Cities. It's clear that that's where the
20 action is and where a lot of the policies that are driving
21 growth and clean energy are at, are not at the national
22 levels and they kind of are playing clean up at best.

23 And so the side conversations, not the main event
24 between the countries, but actually the side event was
25 really where the innovation was discussed. It was where

1 the best networking happened. Where the best projects were
2 with a potential for replication. You know, all of that is
3 happening at different scales and typically smaller scales.
4 And so I think that that's just something that California -
5 - I think a few takeaways from my perspective are just that
6 there's this incredible thirst for implementation
7 solutions. There's just this people want to keep it real.
8 They're tired of talking. They want to do.

9 And their second point they're looking to
10 California for that kind of leadership. And yeah, we
11 always gosh if we only had more resources to do this with
12 that. Well, we have way more resources than most of the
13 sub-national jurisdictions and I think we sort of lose
14 sight of it in our bubble. But we have so many more levers
15 to pull than most other folks do that are operating at the
16 city or province or region or state level within their
17 countries.

18 And so I certainly came away super thankful for
19 that. There's a frustration about the national efforts and
20 there's just this real sense of urgency to get things done.

21 Let's see then I think a few sort of technical
22 notes, and certainly there's a strong focus on energy
23 efficiency, all the different renewables technologies, but
24 a few overarching themes really emerged for me. And I was
25 on a whole bunch of panels with probably 15 or 20 different

1 countries on different topics. That are sort of carrying
2 the water for all of the things that the Commission and the
3 state actually do in energy. So it was renewables and
4 storage and obviously buildings and efficiency.

5 And the role of hydrogen I think is much more
6 mature than maybe the conversation we're having in
7 California. I know that there's a there's a big role in
8 transportation that we've been talking about for a while,
9 but I think in the power sector generally we've kind of
10 under-baked our hydrogen conversation.

11 And, you know, Germany and Scotland and other
12 national jurisdictions that have significant natural gas
13 infrastructure, their fossil gas infrastructure, are really
14 looking hard and pretty far down the road I would say in in
15 hydrogen as a substitute fuel or energy carrier in some
16 form or another. And that maybe we're overestimating
17 infrastructure problems and kind of underestimating the
18 maturity, the existing maturity of that hydrogen ecosystem.

19 So did you want to say something?

20 COMMISSIONER MONAHAN: Well, yeah. I actually
21 think this is something we would should think more about as
22 a conversation about how do we use renewable energy to
23 generate hydrogen for transportation. And potentially for
24 the power sector like they're doing in the EU and other
25 places.

1 COMMISSIONER MCALLISTER: Yeah, exactly. The EU
2 is really taking this seriously and where in Scotland,
3 where the next COP is in Glasgow next year, they have all
4 this North Sea gas infrastructure. And they're looking,
5 they have really committed that hydrogen has to be part of
6 their clean energy future.

7 So I think there's if we need to build kind of a
8 fact-based discussion, because I think sometimes there's a
9 sense of hydrogen is a little bit of a get-out-of-jail-free
10 card for fossil gas. Because a lot of its you know you're
11 reforming the natural gas to get the hydrogen and what
12 keeps that clean, right? And so but I think there are
13 ways, you know DWP has got some interesting work going on
14 with clean hydrogen. And certainly some of these other
15 jurisdictions and nations do.

16 COMMISSIONER MONAHAN: Can I say one last thing?

17 COMMISSIONER MCALLISTER: Yeah, go for it.

18 COMMISSIONER MONAHAN: So it is a conversation I
19 recently had with Mary Nicholas as well, so ARB is also
20 interested in this topic. So it is just worth thinking
21 through how do we do research that really grounds this
22 potential, so we better understand what is the potential
23 for hydrogen in California for multi uses.

24 COMMISSIONER MCALLISTER: Yeah, exactly. And a
25 lot of it is about the electrolyzers getting cheaper. But

1 there's some sites that are great that are natural places
2 where that could get tried out. So but I totally agree. I
3 think a platform for that conversation possibly -- well we
4 have a number of forums that we could create or just
5 leverage for that. So anyway just a suggestion, but I was
6 a little bit surprised by that. By the commitment that
7 some of our counterparts in Europe particularly have to
8 hydrogen.

9 And then also we talked about in the forecast
10 discussion about we sort of compared and contrasted the EFI
11 Report and E3 Report on the future of natural gas. You
12 know, I think one difference is the role of CCS and I think
13 that sort of diversity of opinion was definitely reflected
14 in some of the serious jurisdictions that are dealing with
15 climate that were at the COP as well.

16 So, you know, not exactly the same cast
17 characters as in hydrogen, but I think the CCS is another
18 place where there are proven technical solutions and the
19 question is you know what's their cost trajectory? What's
20 their potential role in our clean energy future?

21 So again, I think that's a conversation we need
22 to figure out a way to have without getting distracted.
23 Because again it looks a lot like the fossil industry and
24 so we have to kind of be careful. Okay, how do we manage
25 that conversation, so that it's responsible and actually

1 focuses on decarbonization, so anyway.

2 And then the third technical theme was the load
3 flexibility. It's time has come. I mean I came back
4 completely convinced that we are out ahead of this in terms
5 of load management standards and we've been talking about
6 in the buildings context demand response and trying to
7 figure out a way to get that to work. And I think we're
8 starting to really hit on something that's going to have
9 resonance across the globe. So again I think California is
10 in the right place to lead that conversation and to work
11 with our progressive counterparts to develop solutions
12 there.

13 And then finally I wanted to just I guess it may
14 be emblematic, but the last talk I gave was sort of like
15 late the night before I got up early to leave the next day.
16 And it was to the Spanish equivalent of the ISO, right?
17 The folks who run the wholesale grid in Spain. And so I
18 was kind of -- the talk was about describing the wholesale
19 system and how this batch happens and sort of how we do
20 things in California.

21 And I said how many people have heard of the
22 California Independent System Operator? And basically
23 nobody raised their hand, a couple people, but these were
24 insiders. I mean these are people who like run the ISO.
25 You know these are like the equivalents of people that work

1 there or work with their version of the ISO.

2 And I said how many people have heard of the duck
3 curve, right? *La femosa curvo de pato*, you know? And
4 everybody raised their hands. So like the marketing or the
5 messaging around the duck curve has had global residents.
6 Regardless of nobody knows where it came from, but they
7 know that the duck curve is a thing.

8 And so they're -- but they're facing not exactly
9 the same issues, but they're facing identically complex but
10 solvable issues. And I think that that connection, that
11 networking is something that we need to build on with them.
12 Whether it's at the COP or you know between years I think
13 there's a lot to focus on, a lot to collaborate on. So you
14 know it's certainly Germany who we work with and Mexico,
15 and others I think can be part of that conversation.

16 And then finally I just want to thank my Advisor
17 Brian and Alana Sanchez for all the international work
18 they're doing. I think it gets to be a burden sometimes,
19 because organizing these international get-togethers is a
20 lot of detail work and just a lot of work. But it's really
21 important actually to get the delegations in here and get
22 them socialized. And, you know, reciprocate as much as we
23 can when we get out of the building. So I want to just
24 show some appreciation to them.

25 So that's it for me. Thank you.

1 CHAIR HOCHSCHILD: Thank you.

2 Vice Chair Scott?

3 VICE CHAIR SCOTT: I don't have too many updates
4 for you all. I did want to note that I had a chance to
5 attend at least the first part of a load management
6 standard workshop kickoff, which was last -- that was last
7 week, right? Yeah, okay.

8 And yeah, I am appreciative that you and
9 Commissioner Douglas have taken a look at that and are
10 bringing the Energy Commission's authority back to the
11 forefront to kind of really think through what we can do
12 there. I think it is going to be critical to how we get to
13 our clean energy, 100 percent clean energy standards'
14 decarbonized grid here in California. And so it was a
15 delight just to get to listen to the first half.

16 And I want to pay close attention to that as it
17 goes on because I think there is a lot of complexity. It's
18 very interesting. We've got all kinds of data and
19 technical pieces and thinking through with the EPIC team,
20 the research team. Are there things that we ought to be
21 putting dollars towards right now that can help answer some
22 of the questions that may come up in the proceeding? I'm
23 very much very much intrigued by that and looking forward
24 to it.

25 The EPIC program I think you all know is being

1 considered before the Public Utilities Commission right now
2 for a continuation of that program. And so the Energy
3 Commission has joined that proceeding as a party, which we
4 did a few months ago. And they're kind of in the pre-
5 hearing conference stage of that right now. But I am sure
6 that if you want additional details or status updates or
7 that kind of thing as that goes along please feel free to
8 reach out to the EPIC team, Laurie ten Hope and her folks.
9 I will be happy to provide briefings about where we are and
10 how that's going.

11 And then I just wanted to highlight a couple of
12 things that are coming up. We have a resilience forum,
13 which will be in Long Beach on February 25th. We will be
14 looking at things like the wildfires and PSPS and how some
15 of the projects -- oh and also like Cal-Adapt and some of
16 the research that the Energy Commission has done with Cal
17 OES, CAL FIRE and others to really think through the types
18 of technologies and research we need, that we've done that
19 are helping with resilience. But that we also need to
20 continue to do to help with resilience in our globally-
21 warmed world here.

22 And then the annual EPIC Symposium is also coming
23 up, so mark your calendars for April 1st. And second it
24 will be over not in the Convention Center, because the
25 Convention Center is under construction right now, but over

1 in oh I think it's Sac State but don't quote me on that.
2 We'll make sure that everyone's got those details, but if
3 your calendars fill up as quickly as mine please do mark
4 the 1st and 2nd, so that you can attend at least part of it
5 if not all.

6 And those are my updates.

7 CHAIR HOCHSCHILD: Great. Thank you.

8 Commissioner Douglas?

9 COMMISSIONER DOUGLAS: I have two very brief
10 updates. I did appreciate the opportunity to participate
11 in the load management standards workshop kickoff and I was
12 happy to do that. And we also held an RPS pre-rulemaking
13 workshop on Friday January 10th and that was well attended
14 and we got great feedback and we're going through comments
15 on that now.

16 So those are my updates.

17 CHAIR HOCHSCHILD: Okay. Just real quick on my
18 end, I attended an energy forum led by former Senate Pro
19 Tem President Kevin de Leon in LA last week along with
20 Assemblyman Holden, Chair of the Assembly Utilities and
21 Senator Hueso, Chair of Senate Energy. Great dialogue on
22 decarbonization in the transportation and building sectors,
23 and a lot of stakeholders there.

24 And I also spoke to the Board of Audi who was in
25 Silicon Valley recently. They are going very big and

1 aggressive on electric vehicles and looking to ramp that
2 part of their business rapidly. And I drove down there in
3 the Audi e-tron, which is I think is the first electric SUV
4 that's you know priced at a more moderate range and I think
5 to the 20 mile range. And a great car.

6 So then coming up we've got a couple things
7 including military confab with the new Commander of the
8 Navy Region Southwest and the new Commanding General of the
9 Marine Corps. So bringing a bunch of folks there.

10 I also want to say I had Davie Earn (phonetic)
11 with me at this thing with the Senator de Leon, who was
12 terrific and gave a great update on all the R&D progress
13 we're making. And I was really glad to see that message
14 get through and what we're doing with microgrids.

15 Those are my highlights, so let's move on to the
16 Executive Director's Report.

17 MR. BOHAN: Good morning, nothing to report.
18 Thank you.

19 CHAIR HOCHSCHILD: Okay. Public Advisor's
20 Report?

21 MS. AVALOS: No report, thank you.

22 CHAIR HOCHSCHILD: Okay. And we do have a public
23 comment, Kevin Messner from AHAM.

24 MR. MESSNER: Thank you and good morning. I was
25 hoping to be coming up to speak on an agenda item, but I'm

1 not. I just wanted to take the time though, it's just
2 frustration building from us and just on a couple items.
3 It's being increasingly difficult to comply with CEC
4 regulations and I'm going to give you three examples and --

5 CHAIR HOCHSCHILD: I'm sorry, can you just
6 identify yourself again?

7 MR. MESSNER: Sorry, Kevin Messner with the
8 Association of Home Appliance Manufacturers.

9 CHAIR HOCHSCHILD: Association of Home Appliance
10 Manufacturers, okay. Thank you.

11 MR. MESSNER: Yes. And they've just been -- a
12 lot of these have been brewing. We have been working with
13 staff and trying to resolve them, so I do appreciate that
14 staff has been responsive and talking to us. But we're
15 just still not getting to any resolutions on things, so
16 these go back a while.

17 One is we still have the issue of LEDs do not
18 work in high-temperature range hoods and that's been going
19 on a while. And there's no solution, so it's just we
20 haven't figured out a way forward, but yet LEDs don't work.
21 They just -- the laws of physics, they degrade with high
22 heat, so you put them in a range hood and with the light
23 bulb standards -- I realize light bulb standards is a big
24 deal.

25 And I'm not trying to get in the middle of that

1 mess, but it's just a compliance issue for our
2 manufacturers.

3 CHAIR HOCHSCHILD: I have LEDs and have for a
4 long time in my range hood and they work fine for me, but
5 is this for particular types of residential or commercial
6 applications you're talking about?

7 MR. MESSNER: No. The LED, the diodes will
8 degrade with high heat, just permanently degrade with high
9 heat, so they will they will more quickly degrade over
10 time. They won't last as long as they're supposed to, so
11 over time every time there's a high heat that they go to
12 that will just physically degrade some of the diodes. And
13 they will be permanently destroyed.

14 CHAIR HOCHSCHILD: Is this mostly a commercial
15 though? I mean --

16 MR. MESSNER: No, this would be in residential.
17 So if you put let's say you have a current range hood and
18 it has -- and it was built for an incandescent light bulb
19 and you can only buy let's say a replacement LED or you're
20 going to sell one, if the heat that comes from let's say
21 steam or just cooking will degrade the LED.

22 CHAIR HOCHSCHILD: I've had them in my hood for
23 four or five years.

24 COMMISSIONER MCALLISTER: I'm in the same boat.
25 They work great, they dim great.

1 MR. MESSNER: You can Google it or check with the
2 light engineers there. They will -- high heat will degrade
3 -- I mean that's not a like -- I'm not raising this as like
4 a controversial CEC agrees with that and staff. It's just
5 there's not a way to move forward, because of the
6 requirements of light bulbs. And yet there's usually an
7 appliance lamp exclusion for the P whatever 26 one, there's
8 no appliance exclusion or high heat specialty exclusions in
9 the others. And it's just this tug-of-war that's been
10 existing.

11 CHAIR HOCHSCHILD: Okay. I mean, I get that. I
12 guess I'm not sure the front of my range hood where these
13 lamps are actually see very high heat even when I'm
14 cooking, I guess so anyway.

15 MR. MESSNER: It could depend on the range hood.
16 It could depend on the range hood, yeah but if they're in
17 there that if they do have the high heat they will
18 (indiscernible)

19 CHAIR HOCHSCHILD: Anyway so on all three of
20 these issues and you've only talked about one, but we'll
21 definitely -- I see Mike nodding back there -- we'll
22 definitely focus on those with you and try to work them.

23 MR. MESSNER: Good. Thank you. And then on the
24 portable air conditioner standards I was here before. And
25 as a reminder you set an effective date that was a couple

101

1 years earlier than every other state in the country. And
2 now is apparently too quick even for CEC, because the
3 certification packets aren't even ready yet for product
4 manufacturers to certify. And the effective date is
5 February 2nd, so in a couple weeks. And there's not even a
6 certification packet ready.

7 So it's those things that just makes it tough to
8 comply when we said that was too early and we can't even --
9 the manufacturers ask me where the packet is, so that's the
10 second one that's just frustrating now.

11 And third one, the last one which I was hoping to
12 be here is the range hood directory and we're trying to
13 work through the issues right now. As I was here before
14 the Commission a couple years ago there's a monopoly given
15 to an entity on a range hood directory. And I was told
16 that there is an administrative path to approve an
17 alternative option if that's the case. We are working to
18 try to do that.

19 We were still working as early as this morning to
20 try to do that, but we're in this potential Iron Triangle
21 where I kind of think back to the steel monopoly. Is there
22 where the steel monopoly back in (indiscernible) would have
23 to approve their competitors. And we need to break through
24 that, because if it were held to where the monopoly has to
25 approve our lab in order to get approved they're not going

1 to approve a competing lab. And you're going to be stuck
2 with a monopoly.

3 And this is kind of a do-loop (phonetic) that we
4 need to get out of. I think there's a way forward. We
5 feel there's a way forward. Hopefully CEC staff agrees
6 there's a way forward. We need to work through that still
7 more, but it's just right now you can't even get a range
8 hood approved for a directory, because of the backlog. You
9 don't even get your phone calls returned, because there's
10 only one lab that's available. It's a five-month wait if
11 you're lucky and that's if you get your phone calls
12 returned.

13 And the due date to comply was January 1st and
14 you can't even get things tested for six months, so we need
15 some more lab capacity ASAP.

16 CHAIR HOCHSCHILD: Yeah, this one I think we can
17 work through and yeah.

18 MR. MESSNER: So those are my three issues.

19 CHAIR HOCHSCHILD: Well, I very much appreciate
20 you raising those, Mr. Messner. We always want to hear
21 where there's concerns so please thank you for coming and
22 sharing that.

23 MR. MESSNER: Sure.

24 CHAIR HOCHSCHILD: We'll follow up.

25 MR. MESSNER: Thanks guys.

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

CHAIR HOCHSCHILD: Thank you.

Let's move on to Item 18, discussion from Chief
Counsel's Report?

MS. HOUCK: No Report.

CHAIR HOCHSCHILD: Okay. We're adjourned.

(The Business Meeting adjourned at 12:08 p.m.)

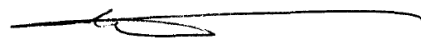
--oOo--

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 30th day of January, 2020.



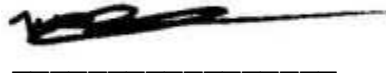
PETER PETTY
CER**D-493
Notary Public

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 30th day of January, 2020.



Myra Severtson
Certified Transcriber
AAERT No. CET**D-852