

DOCKETED

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BUSINESS MEETING

BEFORE THE

CALIFORNIA ENERGY COMMISSION

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

REMOTE ACCESS ONLY

Public comment is accepted solely through the Zoom platform.

The California Energy Commission's (CEC) September 8, 2021 Business Meeting will be held remotely, consistent with Executive Order N-08-21 to continue to help California respond to, recover from, and mitigate the impacts of the COVID-19 pandemic. The public may participate consistent with the direction in the Executive Order.

Pursuant to California Code of Regulations Title 20 section 1104(e), any person may make oral comment on any agenda item. To ensure the orderly conduct of business, such comments will be limited to three minutes or less per person. Any person wishing to comment on information items or reports (non-voting items) shall speak during the general public comment portion of the meeting and have three minutes or less to address all remaining comments.

WEDNESDAY, SEPTEMBER 8, 2021

10:00 A.M.

Reported by:
Peter Petty

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APPEARANCES

Commissioners (Via Remote)

David Hochschild, Chair
Karen Douglas
Andrew McAllister
Patricia Monahan
Siva Gunda

Staff Present: (Via Remote)

Drew Bohan, Executive Director
Linda Barrera, Chief Counsel
Noemi Gallardo, Public Advisor
Dorothy Murimi, Public Advisor's Office

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a. Pursuant to Government Code Section 11126(e), the CEC may adjourn to closed session with its legal counsel to discuss any of the following matters to which the CEC 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>	

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b. Pursuant to Government Code, section 11126, subdivisions (a) and (e), the CEC 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 constitute a significant exposure to litigation against the CEC, which might include personnel matters.	
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P R O C E E D I N G S

SEPTEMBER 8, 2021 10:00 a.m.

MS. MURIMI: The California Energy Commission's Business Meeting will begin shortly. Thank you for your patience.

(Start of Introductory Video.)

Today's Business Meeting is being held remotely. Please note the public comment will now be conducted via Zoom. When the public comment period is announced press the raise-hand feature to indicate you would like to make a comment.

If you are participating by phone to indicate you'd like to make a comment please raise your hand by pressing *9 and then press *6 to unmute. Again, that is *9 to raise your hand and *6 to unmute.

For public comment please note that comments are limited to three minutes or less per person and one representative per organization. Depending on the number of commenters we may adjust the time for public comment to be fair to everyone who'd like to speak.

After you raise your hand the Public Advisor will announce you using the listed Zoom name or with the last three digits of the phone number used to call in to the meeting. The Public Advisor will then open your line. Before making your comment state and spell your name and

1 indicate your affiliation, if any.

2 Finally, to help ensure you're heard clearly
3 speak closely and clearly into the device, do not use the
4 speakerphone feature.

5 Welcome to the California Energy Commission
6 Business Meeting. The meeting will now begin.

7 (End of Introductory Video.)

8 CHAIR HOCHSCHILD: Well, good morning friends and
9 welcome to our September 8th Energy Commission Business
10 Meeting. Let's begin with Commission McAllister leading us
11 in the Pledge of Allegiance.

12 (Whereupon the Pledge of Allegiance was recited.)

13 CHAIR HOCHSCHILD: Thank you, Commissioner.

14 CHAIR HOCHSCHILD: Thank you Commissioner.

15 Before turning to our business items, I wanted to
16 acknowledge that we're still in the middle of the COVID-19
17 surge due to the Delta variant and we want to remind
18 everyone to continue to exercise caution, get vaccinated,
19 wear masks when indoors, and please continue to be
20 vigilant. I know it's been a long road here, but taking
21 these precautions really does make a difference.

22 I also want to address the current hot weather
23 we're having and encourage everyone again to sign up for
24 Flex Alert Notifications at flexalert.org to stay informed
25 and obtain energy conservation tips. Everybody has a role

9

1 to play in helping support grid reliability in California
2 and we all need to be good citizens of the grid.

3 So for instructions, today's Business Meeting is
4 being held remotely consistent with Executive Order N-08-21
5 to continue to help California respond to, recover from,
6 and mitigate the impacts of the COVID-19 pandemic. The
7 public can participate in the Business Meeting consistent
8 with the direction in this Executive Order.

9 Zoom is the platform we are using to conduct
10 business meetings. Instructions for remote participation
11 can be found in the notice for this meeting and as set
12 forth on the agenda posted to the Commission's website.

13 If Zoom were to shut down, we would switch to the
14 Verizon phone line at 888-823-5065, the pass code is
15 "Business Meeting." Public comment would then be accepted
16 through Verizon.

17 And pursuant to California Code of Regulations
18 Title 20, section 1104(e) any person may make oral comments
19 on any agenda item. To ensure the orderly conduct of
20 business, public comments will be limited to three minutes
21 or less per person for each agenda item voted on today.
22 Any person wishing to comment on information items or
23 reports, which are non-voting items shall reserve their
24 comment for the general public comment portion of the
25 meeting agenda and have a total of three minutes or less to

10

1 state all remaining comments.

2 We are now solely using Zoom for public comment.
3 Once the public comment period begins if you would like to
4 speak please raise your hand by clicking the hand icon at
5 the bottom of your screen. If you're joining by phone
6 press *9 to raise your hand and *6 to unmute.

7 After the Public Advisor calls on you to speak,
8 remember to spell your name and state your affiliation, if
9 any.

10 Before turning to the agenda items, I am happy to
11 announce that during today's Business Meeting, the
12 Commission will be seeking to approve over \$12.5 million in
13 investments. All of this contributes to California's
14 economic recovery.

15 So turning now to Item 1 the Consent Calendar,
16 because there are multiple recusals that need to be made,
17 we'll vote on these items separately starting with Item 1a,
18 the Center for Transportation and the Environment. We'll
19 turn to Commissioner Monahan.

20 COMMISSIONER MONAHAN: Thank you. On this Item
21 1a on the Consent Agenda I'm recusing myself from any
22 discussion, consideration and vote on the proposed
23 amendment to the grant award for the Center for
24 Transportation and the Environment's Agreement ARV-21-017.
25 The Regents of UC Berkeley is a major sub-awardee under the

1 grant, which supports the expansion of zero emission trucks
2 and related fueling infrastructure. I currently serve as a
3 Member of the Board of Advisors for the UC Institute of
4 Transportation Studies. In that role I do not make
5 governance decisions on behalf of the Institute, but we
6 exist to provide guidance and oversight to the UC ITS
7 programs and its four branches, which includes UC Berkeley
8 ITS.

9 Additionally I don't receive any compensation in
10 any form, including reimbursements or per diem for
11 expenses. So there is no financial interest in which there
12 could be a conflict of interest under the Political Reform
13 Act or Government Code section 1090.

14 However, in an abundance of caution I'm recusing
15 myself to avoid any perception of a conflict of interest in
16 this grant amendment that benefits UC Berkeley's advanced
17 transportation programs. I will mute, but I'm going to
18 keep my video on while I leave the room and I will return
19 after the Public Advisor instructs me to do so.

20 CHAIR HOCHSCHILD: Thank you, Commissioner.

21 Madam Public Advisor, is there any public comment
22 on Item 1a?

23 MS. GALLARDO: This is Noemi, the Public Advisor.
24 Just a quick reminder to the attendees to use the raise-
25 hand feature. It's an icon that looks like a high-five if

1 you'd like to ask or make a comment, excuse me, and *9 if
2 you are on by phone. I do not see any hands, we may
3 proceed.

4 CHAIR HOCHSCHILD: Okay. Commissioner Gunda,
5 would you be willing to move Item 1a?

6 COMMISSIONER GUNDA: Yes, I move Item 1a.

7 CHAIR HOCHSCHILD: And Commission McAllister,
8 would you be willing to second?

9 COMMISSIONER MCALLISTER: I'll second Item 1a.

10 CHAIR HOCHSCHILD: Okay. All in favor say aye,
11 Commissioner Gunda?

12 COMMISSIONER GUNDA: Aye.

13 CHAIR HOCHSCHILD: Commissioner McAllister?

14 COMMISSIONER MCALLISTER: Aye.

15 CHAIR HOCHSCHILD: Commissioner Douglas?

16 COMMISSIONER DOUGLAS: Aye.

17 CHAIR HOCHSCHILD: And I vote aye as well. That
18 item passes 4-0, with Commissioner Monahan abstaining.

19 Let's turn now to Items 1b, 1c and 1e as a group.
20 And let's go to Commissioner McAllister.

21 COMMISSIONER MCALLISTER: Great. Thank you,
22 Chair. So on these items I'll just describe each of them
23 very briefly. So 1b is our membership, the Energy
24 Commission's membership to the National Association of
25 State Energy Officials. I'm a past chair of NASEO and

1 currently on the Executive Committee. I do not get paid or
2 receive reimbursement from NASEO. And this membership does
3 -- well and I'll recuse myself from that vote on 1b.

4 1c, the Alliance to Save Energy, I am on the
5 Board Of the Alliance. It's a national nonprofit voting on
6 energy efficiency here working largely in the federal
7 context on energy efficiency. And this is the CEC's
8 membership, so I will recuse myself from that. I neither
9 there also do not receive any reimbursement for those
10 activities. And our membership there allows staff to meet
11 with key policy and decision makers largely in the federal
12 context. And it works with over 100 organizations to
13 advanced energy efficiency in federal legislation, very hot
14 and heavy right now.

15 1e is the Western Interstate Energy Board. I
16 serve as California's Representative on that body, which
17 works with other states across the Western Interconnect on
18 various electricity planning and reliability issues.

19 So I will recuse myself from all three of those
20 items, b, c, and e.

21 CHAIR HOCHSCHILD: Thank you, Commissioner.

22 COMMISSIONER MCALLISTER: So I'll step away and
23 come back after the vote.

24 CHAIR HOCHSCHILD: Thank you, Commissioner,
25 appreciate that. Any public comments on Items 1b, c, and

1 e?

2 MS. GALLARDO: This is Noemi, the Public Advisor.
3 Again, a reminder to attendees if you would like to make a
4 public comment, please raise your hand using the high-five
5 icon on the screen or pressing *9.

6 I do not see any hands raised. Chair, we may
7 proceed.

8 CHAIR HOCHSCHILD: Thank you. Commissioner
9 Monahan, would you be willing to move Items 1b, c, and e?

10 COMMISSIONER MONAHAN: I move Items 1b, c, and e.

11 CHAIR HOCHSCHILD: And Commissioner Douglas,
12 would you be willing to second?

13 COMMISSIONER DOUGLAS: Second.

14 CHAIR HOCHSCHILD: All in favor say aye,
15 Commissioner Monahan?

16 COMMISSIONER MONAHAN: Aye.

17 CHAIR HOCHSCHILD: Commissioner Douglas?

18 COMMISSIONER DOUGLAS: Aye.

19 Commissioner Gunda?

20 COMMISSIONER GUNDA: Aye.

21 CHAIR HOCHSCHILD: And I vote aye as well.

22 Those items pass 4-0, with Commissioner McAllister
23 abstaining.

24 Let's turn now to Item 1d. Do we have any public
25 comment on 1d?

1 MS. GALLARDO: This is Noemi, the Public Advisor.
2 A reminder to attendees to use the raise-hand feature or
3 press *9 if you're on by phone.
4 I do not see any hands. Chair, we may proceed.
5 CHAIR HOCHSCHILD: Okay, Commissioner Douglas,
6 would you be willing to move Item 1d?
7 COMMISSIONER DOUGLAS: Yes, I move Item 1d.
8 CHAIR HOCHSCHILD: Thank you. And Commissioner
9 McAllister, would you be willing to second?
10 COMMISSIONER MCALLISTER: Second Item 1d.
11 CHAIR HOCHSCHILD: Okay all in favor say aye,
12 Commissioner Douglas?
13 COMMISSIONER DOUGLAS: Aye.
14 CHAIR HOCHSCHILD: Commissioner McAllister?
15 COMMISSIONER MCALLISTER: Aye.
16 CHAIR HOCHSCHILD: Commissioner Monahan?
17 COMMISSIONER MONAHAN: Aye.
18 CHAIR HOCHSCHILD: And Commissioner Gunda?
19 COMMISSIONER GUNDA: Aye.
20 CHAIR HOCHSCHILD: And I vote aye as well. That
21 item passes unanimously.
22 Let's move now to Item 2, Order on Process for
23 Battery Storage Systems.
24 MR. PITTARD: Good morning, Chair and
25 Commissioners. My name is Shawn Pittard. I am the Deputy

1 Director of the Siting, Transmission, and Environmental
2 Protection Division. At the August 17th Business Meeting I
3 presented, and this was approved, two orders establishing
4 the processes for expediting two of three actions the CEC
5 was directed to implement by Governor Newsom's July 30,
6 2021, Emergency Proclamation. The prior orders established
7 processes for expediting post-certification changes to
8 existing CEC jurisdictional power plants and the licensing
9 of new emergency and temporary power generators that could
10 provide additional capacity to the grid by October 31,
11 2021.

12 I am here today to present an order to establish
13 the process for expediting the third action, the licensing
14 of battery energy storage projects. With me are the STEP
15 managers who will implement the order, Eric Knight, Siting
16 and Environmental Protection Office Manager and our lead
17 for this effort, Jon Hilliard. Also with us are our
18 partners from Chief Counsel's Office, Lisa DeCarlo and
19 Kerry Willis. Next slide, please. Thank you.

20 The benefits of this action for Californians is
21 that it helps immediately address climate change impacts
22 and increase grid resiliency and reliability to help us
23 avoid outages that can adversely impact families and
24 communities throughout the state. Next slide, please.

25 The Governor issued the Emergency Proclamation as

1 the result of sudden and severe energy shortages in
2 California caused by extreme drought, wildfires, and
3 record-breaking heat events throughout the Western United
4 States. Due to this context of extreme weather events the
5 Proclamation declares that California faces an energy
6 supply shortfall of up to 3,500 megawatts in 2021 and up to
7 5,000 megawatts in summer 2022. Next slide, please.

8 This, the proclamation, authorizes the CEC to
9 license new or expansions of existing battery storage
10 systems of 20 megawatts or more that the CEC determines are
11 capable of discharging for at least two hours and will
12 deliver net peak energy by October 31, 2022. Next slide,
13 please.

14 For CEC's licensing of qualifying battery storage
15 systems the Proclamation suspends the California
16 Environmental Quality Act, CEQA, and the CEQA Guidelines
17 and establishes that the CEC's license is in lieu of any
18 other permit that would normally be required by a local or
19 state agency. The Order would establish the following to
20 expedite the licensing within 10 days of the Order's
21 adoption the CEC's Executive Director will publish a list
22 of informational requirements for license applications.

23 Within 10 days of an application being filed the
24 Executive Director will verify it is complete and that the
25 project is capable of discharging for at least two hours

1 and will deliver peak energy, net peak energy by October
2 31, 2022.

3 Once an application is complete the Executive
4 Director will conduct an analysis of the project's
5 potential impacts on the environment and public health and
6 safety, as well as the project's compliance with applicable
7 laws, ordinances, regulations, and standards. Staff will
8 meet and consult with local jurisdictions and state
9 agencies to ensure all public health and safety concerns
10 are addressed.

11 The Executive Director will impose conditions and
12 verification and monitoring requirements on the license as
13 appropriate to mitigate any potential impacts to the extent
14 feasible.

15 The Executive Director will complete the analysis
16 within 21 days and publish it for a 10-day comment period.

17 Within 7 days after the close of the comment
18 period, the Executive Director will file a decision on the
19 application granting or denying the license. The decision
20 of the Executive Director is final and not subject to
21 further consideration or appeal. Next slide, please.

22 Thank you.

23 Staff recommends adoption of Order No. 21-0908-1.
24 This concludes my presentation. We are available to answer
25 questions. Thank you.

1 CHAIR HOCHSCHILD: Thank you, Shawn, appreciate
2 that.

3 Any public comment on Item 2?

4 MS. GALLARDO: This is Noemi, the Public Advisor.
5 A reminder to attendees if you'd like to make a public
6 comment please use the raise-hand icon on the screen or
7 press *9 if you are on by phone.

8 I do not see any hands raised. Chair, I think we
9 can proceed.

10 CHAIR HOCHSCHILD: Thank you. Let's begin, if we
11 could, with Commissioner Douglas.

12 COMMISSIONER DOUGLAS: All right, thank you very
13 much, Chair Hochschild.

14 So I wanted to start by thanking Shawn Pittard
15 and the STEP Division staff, Jon Hilliard, of course, who
16 worked very hard to put this together in an expedited way.
17 And the STEP Division's also worked -- this is actually the
18 third permitting process brought forward under from the
19 Emergency Proclamation. I also very much want to thank
20 Linda Barrera and Chief Counsel's Office for their hard
21 work on all of this.

22 Like the two permitting processes that we
23 approved last month, this process is designed to work in an
24 expedited way. But also to emphasize the Energy
25 Commission's commitment to safety and reliability.

1 In addition, we built in some additional public
2 process requirements to ensure and maximize transparency in
3 the permitting process. And those include a requirement
4 that property owners within 1,000 feet of any proposed
5 project be notified that local, regional, state, and
6 federal agencies that either have jurisdiction or would
7 have jurisdiction over the project through a different
8 process be notified that tribes that are traditionally or
9 culturally affiliated with the geographic area be notified.

10 And this proposal also specifies clear
11 expectations for communication and collaboration with local
12 and state agencies. Those include attempts to resolve any
13 potential noncompliance with applicable laws, ordinances,
14 regulations, and standards. And requirements that CEC
15 staff must meet with representatives of any local
16 jurisdiction or state agency that has or would have
17 jurisdiction over an aspect of the project, would have
18 jurisdiction to ensure that we fully understand any issues
19 presented by the project. And, in particular, to review
20 the projects for compliance with public health and safety
21 measures, including fire and hazardous materials to ensure
22 that public health and safety concerns are addressed in the
23 license.

24 So I think this proposed project, this proposed
25 process absolutely follows the directive in the Emergency

1 Proclamation to ensure that the Energy Commission acts
2 immediately to accelerate deployment of clean energy and
3 storage projects that can come online by the deadline
4 established for this process in the proclamation.

5 And I support approval of this item. And again
6 commend STEP and the Legal Office for their work on this
7 order and on establishing the expedited permitting process
8 for these projects.

9 CHAIR HOCHSCHILD: Great. Thank you,
10 Commissioner. Any other Commissioners wishing to make a
11 comment or ask a question?

12 COMMISSIONER GUNDA: Yes.

13 CHAIR HOCHSCHILD: Yeah, please go ahead,
14 Commissioner Gunda.

15 COMMISSIONER GUNDA: Yeah, Chair, thank you.

16 I just I think wanted I guess more than anything
17 to reiterate the thanks to the Siting team and the Legal
18 team for their really incredible work in kind of taking
19 these actions required in an extremely expert fashion, but
20 also as thoughtfully as they're able to and
21 collaboratively. So I want to thank definitely Shawn and
22 Jon, as Commissioner Douglas mentioned. And from the legal
23 team including Linda, all the good work that they are
24 doing.

25 So I also want to just recognize Commissioner

1 Douglas's leadership. This has been an incredible three to
2 four months of work. I think I can pretty confidently say
3 that without Commissioner Douglas's expertise a lot of
4 these things cannot happen (indiscernible) to crafting
5 these important and delicate issues. So I want to thank
6 Commissioner Douglas and her office, but also my advisors
7 Liz and Le-Quyen for their ongoing support of this work.

8 So thanks to everybody. And it's really great to
9 move this forward and I'm looking forward to supporting it.

10 CHAIR HOCHSCHILD: Thank you. I hardily second
11 those comments. And Commissioner Douglas, thank you from
12 all of us for all your work on this. And Shawn as well,
13 thank you and the team. This is a definite step forward.

14 So with that unless there's other comments,
15 Commissioner Douglas, would you be willing to move Item 2?

16 COMMISSIONER DOUGLAS: Absolutely. I move
17 approval of Item 2.

18 CHAIR HOCHSCHILD: Okay. Commissioner Gunda,
19 would you be willing to second?

20 COMMISSIONER GUNDA: Yes, second Item 2.

21 CHAIR HOCHSCHILD: Okay all in favor say aye,
22 Commissioner Douglas?

23 COMMISSIONER DOUGLAS: Aye.

24 CHAIR HOCHSCHILD: Commissioner Gunda?

25 COMMISSIONER GUNDA: Aye.

1 CHAIR HOCHSCHILD: Commissioner McAllister?

2 COMMISSIONER MCALLISTER: Aye.

3 CHAIR HOCHSCHILD: Commissioner Monahan?

4 COMMISSIONER MONAHAN: Aye.

5 CHAIR HOCHSCHILD: And I vote aye as well. Item
6 2 passes unanimously.

7 Let's turn now to Item 3, Procter and Gamble
8 Cogen Project.

9 MS. HUBER: Good morning, Chair and
10 Commissioners. My name is Elizabeth Huber and I manage the
11 Office of Compliance Monitoring & Enforcement of the
12 Siting, Transmission, and Environmental Protection
13 Division. With me today is the Lead Compliance Project
14 Manager, Mary Dyas; Staff Counsel, Lisa DeCarlo; and from
15 Energy Assessments Division, the Data Integration and
16 Policy Office, Michael Nyberg.

17 Also on behalf of the project owner we have Ross
18 Gould of Power Generation along with Senior Attorney
19 Lourdes White, Environmental Compliance Supervisor Rene
20 Toledo. And they are representing the Sacramento Municipal
21 Utility District, also commonly known as SMUD.

22 We're here to present on Procter and Gamble
23 Cogeneration Project's ownership and name change petition.
24 Next slide, please.

25 The Procter and Gamble Cogeneration Project was

1 designed to be part of the SMUD's response to the closing
2 of the nuclear generating station at Rancho Seco more than
3 30 years ago. The Procter and Gamble Cogen Project has
4 been owned by the Sacramento Cogeneration Authority, also
5 known as SCA since it was permitted more than 27 years ago.
6 SCA is a joint powers agency in which SMUD is the
7 controlling member. Specifically, SCA is governed by a
8 commission composed of seven members of the SMUD Board of
9 Directors. The SCA Commission agreed to move ownership and
10 operations of the Procter and Gamble Cogeneration Project
11 to SMUD's Financing Authority and rename the facility
12 Procter and Gamble Power Plant.

13 Further at the SMUD Board of Directors meeting on
14 August 28, 2021, the Board adopted their 2030 Zero Carbon
15 Plan. A key portion of that plan is to retire all five of
16 their natural gas-fired power plants by 2030. This
17 ownership move supports operational efficiencies as they
18 realize the retirement of these facilities. Next slide,
19 please.

20 The Procter and Gamble Cogeneration Project was
21 licensed on November 16, 1994, and began commercial
22 operation on March 1st, 1997. The facility is a 171-
23 megawatt combined-cycle power plant producing electricity
24 for the adjacent Procter and Gamble Company, which
25 employees 206 Sacramentans in their manufacturing

1 operation. In addition to the two combined-cycle units the
2 facility also includes a simple-cycle unit for peak power
3 production.

4 On July 15, 2021, the SCA filed a petition to
5 change the ownership to change the ownership of the
6 facility to SMUD's Financing Authority and to change the
7 name to Proctor and Gamble Power Plant. SMUD's Financing
8 Authority is a joint powers authority formed by SMUD in the
9 Modesto Irrigation District. The current operator of the
10 facility, Ethos Energy Power Plant Services, remains under
11 contract and will continue to be the operator.

12 On August 3rd, 2021, CEC staff filed a Statement
13 of Staff Approval and posted for a 14-day public comment
14 period. During this public comment period staff received
15 an objection citing the purported failure of the plant to
16 comply with Title 20, Section 1304, of the CEC's
17 regulations. This provision is in the Data Collection
18 portion of our regulations and specifies that Quarterly
19 Fuel and Energy Reports, power plant owners and operators
20 must submit to the CEC. This database is commonly referred
21 to as QFER.

22 Compliance with this provision is not a
23 prerequisite for completing a change of ownership under
24 section 1769 of our Power Plant Siting Regulations.
25 Nevertheless, staff has confirmed that this project is up

1 to date on all required reporting. Next slide, please.

2 The petition submitted to the CEC affirms that
3 the SMUD Financing Authority understands and agrees to
4 comply with the Conditions of Certification for the plant
5 and that they are moving forward with this petition to
6 allow both SMUD and the SMUD Financing Authority to realize
7 greater operational efficiencies. Therefore, staff
8 recommends the CEC approve the proposed ownership and name
9 change. This concludes my presentation and we are
10 available to answer any questions. Thank you.

11 CHAIR HOCHSCHILD: Thank you, Elizabeth.

12 Let's turn now to public comment on Item 3.

13 MS. GALLARDO: This is Noemi, the Public Advisor.
14 A reminder to attendees if you would like to make a public
15 comment, please use the raise-hand feature that looks like
16 a high-five on the screen or press *9 if you are on by
17 phone.

18 All right I do see one hand raised, so this is a
19 phone number ending in 385. Your line is open, you may
20 begin. And a reminder to please state your name, spell it,
21 and indicate your affiliation if any. You may begin.

22 MR. UHLER: Good morning, Commission, this is
23 Steve Uhler, U-h-l-e-r. I made this objection as "for the
24 want of a nail the shoe was lost." There's a situation
25 where the prior name cannot be found in QFER in its full,

27

1 and more importantly, cannot be found in the EIA's data,
2 which the Energy Commission uses to administer some other
3 regulations such as power source disclosure.

4 I'm struck by the situation of looking at the
5 presentation and the time spent on this, the number of
6 keystrokes in order to correct the issue and remove my
7 objection, therefore removing these -- this and the next
8 agenda item, updated agenda, doesn't seem to be a rational
9 decision making.

10 You have 1770 of Title 20 that says that you
11 shall make sure that people follow your rules, very
12 important.

13 I see there are other agenda items on here today,
14 something called the Stack Analysis. In my conversation
15 with Angela Tanghetti, I find -- and in prior years where
16 I've actually been able to take data out of QFER, hand it
17 to her and have her thank me for notifying that she left
18 off some renewable resources in something called the
19 renewable net short planning, renewable net short. It's
20 very important for everybody to know all the players.
21 Hopefully you read my comment lock, stock and barrel.

22 Public wants to know everything about the
23 systems, wants to be able to figure out how to avoid the
24 use of fossil fuel. So I would wish that you would at
25 least have folks bring these databases up to snuff. QFER

1 currently stands, with over 400 power plants, they don't
2 know the EIA data connection and this is very important.

3 And again back to this stack, which is a
4 simplistic look in this day and age, there should be no
5 need for any simplistic look at how we run the power
6 system. We've had long-time material resource planning
7 systems that if they have a complete lock, stock and barrel
8 product structure we could avoid or at least know what to
9 do in a crucial time nearing a power outage. If you'll
10 agree to that there is no need for the next agenda item.
11 This concludes my comment, thank you.

12 MS. GALLARDO: Thank you.

13 This is Noemi, the Public Advisor. I do not see
14 any other hands raised. Chair, we may proceed.

15 CHAIR HOCHSCHILD: Okay let's turn to
16 Commissioner discussion, starting with Commissioner
17 Douglas.

18 COMMISSIONER DOUGLAS: Great. Thank you. So I
19 think I wanted to start by saying that, and Elizabeth
20 explained this, requests for changes in ownership are
21 typically approved at the staff level after staff and CEC
22 attorneys perform the necessary work to ensure compliance
23 with the Commission's regulations.

24 However, when an objection is filed to the
25 staff's determination that becomes something that goes to

1 the Commission then to evaluate whether the ownership
2 change meets the legal requirements. So the docketed
3 information and staff's presentation just now reflect their
4 determination that the Applicant's request did contain the
5 required information and that includes a discussion of any
6 significant change in the operational relationship between
7 the owner and operator, a statement identifying the party
8 responsible for compliance with the Commission's Conditions
9 of Certification. And a statement verified by the new
10 owner or operator in the manner described in section 1707
11 that the new owner or operator understands the Conditions
12 of Certification and agrees to comply with them.

13 So and that has been demonstrated in this case.
14 As I understand it, the objections to the staff's
15 recommendation of approval don't really relate to changes
16 in ownership and to the determination that we make to
17 approve changes and ownership in this instance. So, for
18 example, Commission Regulation section 1769 (a) (1) (E)
19 applies. But the objection does not apply to the request
20 in front of us. That provision that I just cited does not
21 relate to changes in ownership.

22 The other objection that the Applicant failed to
23 comply with Commission Regulation 1304 doesn't relate
24 either. That objection really applies to the QFER
25 reporting. So we could ask, if there is interest, Michael

1 Nyberg to talk about QFER reporting. It's come up in
2 comments before, but it really doesn't relate to the
3 determinations that we need to make on changes in
4 ownership. So for those reasons I support staff's
5 recommendation and would recommend that we approve the
6 change in ownership that's proposed here today.

7 I do appreciate Mr. Uhler's participation and
8 sharing with us his concerns and, of course, public
9 questions and feedback on our programs. And the interest
10 he has in understanding energy information and being able
11 to find information is something that I think we all have
12 an interest in, in continuing to approve. But it's not a
13 reason to not approve this change in ownership.

14 So I think those are my comments for now. And
15 I'm prepared to make a motion on this.

16 CHAIR HOCHSCHILD: Yeah, unless there's other
17 Commissioners wishing to make a comment would you be
18 willing to move Item 3?

19 COMMISSIONER DOUGLAS: Yes, I move Item 3.

20 CHAIR HOCHSCHILD: Commissioner McAllister, would
21 you be willing to second?

22 COMMISSIONER MCALLISTER: I will second, yes
23 indeed.

24 CHAIR HOCHSCHILD: Thank you. All in favor on
25 Item 3 say aye, Commissioner Douglas?

1 COMMISSIONER DOUGLAS: Aye.

2 CHAIR HOCHSCHILD: Commissioner McAllister?

3 COMMISSIONER MCALLISTER: Aye.

4 CHAIR HOCHSCHILD: Commissioner Gunda?

5 COMMISSIONER GUNDA: Aye.

6 CHAIR HOCHSCHILD: Commissioner Monahan?

7 COMMISSIONER MONAHAN: Aye.

8 (Audio cuts out briefly.)

9 COMMISSIONER MCALLISTER: It looks like we may
10 have lost the Chair.

11 CHAIR HOCHSCHILD: And I vote aye as well. That
12 item passes on the Cogen Project.

13 Elizabeth, are you there?

14 MS. HUBER: I am.

15 CHAIR HOCHSCHILD: Go ahead, Item 4.

16 MS. HUBER: Okay, thank you. Hello again, Chair
17 and Commissioners. My name is Elizabeth Huber. I manage
18 the Office of Compliance Monitoring & Enforcement in the
19 STEP Division. With me this morning is Lead Compliance
20 Project Manager, Mary Dyas; Staff Counsel, Lisa DeCarlo;
21 and from Energy Assessments, Michael Nyberg.

22 Also on behalf of the project owner we once again
23 have Ross Gould; their Senior Attorney, Lourdes White; and
24 Rene Toledo representing the Sacramento Municipal Utility
25 District, also known as SMUD.

1 We're here to present on Campbell Cogeneration
2 Project's submission of change of ownership and name. Next
3 slide, please.

4 This petition is exactly like Item 3 that you
5 just voted on. The Campbell Cogeneration Project was also
6 part of the SMUD's response to the closing of the Rancho
7 Seco Nuclear Generating Station. The Campbell Cogen
8 Project has been owned by the Sacramento Power Authority,
9 known as SPA, since it was permitted about 24 years ago.

10 The SPA is also a joint powers agency in which
11 SMUD is a controlling member. Specifically, SPA is
12 governed by a commission composed of seven members of the
13 SMUD Board of Directors. The SPA voted earlier this year
14 to move ownership and operations of the Campbell Cogen
15 Project to SMUD's Financing Authority and rename the
16 facility Campbell Power Plant. Under SMUD's recently
17 adopted 2030 Zero Carbon Plan the Campbell Cogen Project is
18 the first of their five natural gas-fired power plants
19 scheduled to retire, which is as early as 2025. And again,
20 this ownership move supports their long-term objectives to
21 realize these power plant retirements. Next slide please.

22 The Campbell Cogeneration Project was licensed on
23 November 16th, 1994, and began commercial operation in
24 October of '97. The facility is a 158-megawatt simple-
25 cycle power plant that originally provided steam and

1 electricity to the nearby Campbell Soup food processing
2 plant until its closure. And continues to provide
3 electricity back to the SMUD grid.

4 On July 15th, 2021, SPA filed a petition to
5 change the ownership of the project to SMUD's Financing
6 Authority and again, change the name to Campbell Power
7 Plant. As stated in Item 3, SMUD's Financing Authority is
8 a joint powers authority formed by SMUD and the Modesto
9 Irrigation District.

10 Further, the current operator of the facility,
11 Ethos Energy Power Plant will remain under contract and
12 will oversee the facility's operation.

13 On August 3rd, 2021, staff filed their staff-
14 approved project change and posted for the 14-day public
15 comment period. Again, during this public comment period
16 staff received one objection citing the purported failure
17 of the plant to comply with Title 20, Section 1304, of the
18 CEC's regulations. This provision is again in the QFER
19 database submission.

20 Finally, compliance with this provision is not a
21 prerequisite for completing a change of ownership under
22 1769 of our Power Plant Siting Regulations. Nevertheless,
23 staff has confirmed that this project is up-to-date on all
24 required reporting. Next slide, please.

25 The petition submitted to the CEC affirms that

1 the SMUD Financing Authority understands and agrees to
2 comply with the Conditions of Certification for the plant
3 and that they are moving forward with this petition to
4 allow both SMUD and the SMUD Financing Authority to realize
5 greater operational efficiencies as this power plant
6 transitions to retirement. Therefore, staff recommends the
7 CEC approve the proposed ownership and name change. And,
8 again, we are all here and available for any questions
9 there may be. Thank you.

10 CHAIR HOCHSCHILD: Thank you, Elizabeth.

11 Let's move on to public comment, do we have any?
12 (No audible response.) Can you guys hear me?

13 MS. HUBER: Yes, we can hear you Chair.

14 CHAIR HOCHSCHILD: Yeah, Noemi, do we have any
15 public comment on this?

16 MS. MURIMI: Hello, this is Dorothy. We do have
17 a raised hand.

18 CHAIR HOCHSCHILD: Okay.

19 MS. MURIMI: One moment. So Participant with a
20 phone number ending in 385 you can now speak.

21 MR. UHLER: This is Steve Uhler again, U-h-l-e-r.
22 I didn't hear any discussion to the requirement under post
23 certification activity 1770 compliance verification where
24 the Commission promises to the public, to the state of
25 California, to monitor all conditions and including all

1 applicable laws and your own law and enactment, which is a
2 law in the state of 1304, has not been complied with.

3 And once again for the loss of a shoe the horse
4 was lost. I'm concerned that if we continue to allow a
5 database such as QFER to be out there with incorrect
6 information we are going to be headed for a situation where
7 planning capabilities are greatly reduced. They already
8 are, you knew last August. You couldn't plan, couldn't
9 even figure out that you were -- CAISO was exporting or
10 somebody was shutting down a power plant.

11 These are primary items and product structure
12 control that just about everybody else on the planet who's
13 helping us recover from COVID can ensure that we get things
14 like toilet paper or automobiles or semiconductors. At the
15 Commission they cannot put together a complete and accurate
16 list that staff will use. And this has shown that staff
17 doesn't use this, because they've decided to use EIA data
18 for power source disclosure, which at this point and time
19 is incorrect. You're in a process for power source
20 disclosure where for the first time we're going to see
21 greenhouse gases. And naming conventions are important.
22 You have a group that seems to only use the name, will not
23 apparently accept any IDs from any other agencies to
24 identify a power plant.

25 So you really need to consider 1770. You're

1 promising that you'll make sure all these rules will be
2 followed, so I'd like to hear that.

3 I would most like to hear whether or not QFER
4 should be even thought of as a resource, because this is a
5 real problem. I'll dump trying to correct QFER. I've
6 been trying to get some people there to correct IDs in
7 there for quite a while. But I'd like to know whether or
8 not QFER has any value. That's my whole reason for making
9 this objection and raising a hand high enough for you folks
10 to finally come and look at it.

11 I have no problem with them operating the plants,
12 because they need to because, due to dropping a wrench in a
13 control panel, we lost a nuclear power plant and was shut
14 down on 6789. So we need to make sure that we don't lose
15 the kingdom over this whole thing. That's the end of my
16 comment. Thank you.

17 CHAIR HOCHSCHILD: Thank you.

18 Any other public comments on Item 4?

19 MS. MURIMI: Thank you, Chair. I'm going to just
20 make a quick announcement. So people who are calling in on
21 the phone press *9 to raise their hand and *6 to mute or
22 unmute on your end. And anyone who is on Zoom you can use
23 the raise-hand feature, it looks like a high-five.

24 So I'm going to take a quick look again for our
25 participants. Seeing no more raised hands I'll hand the

1 mic back to you Chair.

2 CHAIR HOCHSCHILD: Thank you. Let's turn to
3 Commissioner Douglas.

4 COMMISSIONER DOUGLAS: All right. I'm trying to
5 unfreeze my video there. Thank you. So let me just ask if
6 Michael Nyberg would like to say anything about the QFER
7 reporting and uses of it, which is -- Michael are you on?

8 MR. NYBERG: I am. Can you see me?

9 COMMISSIONER DOUGLAS: I can hear you.

10 MR. NYBERG: Oh okay, I did -- I think I started
11 my video. But yes, we've received numerous requests and
12 queries from Mr. Uhler and have tried our best to
13 incorporate the suggestions that he asked when indeed we do
14 find that there is an error or something is slightly askew.
15 At the end of the day it does happen, there's full
16 acknowledgment there.

17 However, as he suggests we do try our best to
18 track all the power plants in California with a singular
19 code. And where the issues arise I hate to get into the
20 weeds but I'll just, since it's been brought up I'll just
21 bring it up very quickly, is that different organizational
22 entities track things differently and that's particularly
23 true with regard to power plants. The ISO issues different
24 IDs for their resources as they're known as. The EIA has
25 reporting thresholds that while similar to ours they don't

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1 report on them every year in, year out. They have a 999
2 code that rolls up a bunch of the smaller ones as part of
3 their survey, because they only survey a large sample of
4 the entire population of the U.S. of the power plants that
5 qualify to report.

6 And so California really does try to track down
7 every single power plant rated at 1 megawatt and larger
8 under official reporting. And in doing so we find that
9 where the ISO doesn't track such power plants, because
10 perhaps they're not within the ISO service area, if you
11 will, or within their grid -- they're in a different grid -
12 - we've had to come up with a universal coding.

13 And I think this gets to the heart of the matter
14 of what Steve, Mr. Uhler is asking about, and so he's
15 right. I mean we do try to align these things where they
16 can be aligned, but often they can't because they're just
17 different where the ISO has one code for something we may
18 have that split because of how the power plant evolved, and
19 it is two separate entities. But maybe the electrical tie-
20 in that the power plants go to is a single ISO node. So
21 these are again, like I said, getting into the weeds of how
22 things are done.

23 With regard to the naming conventions, we do rely
24 almost predominantly on what the reporting entities tell us
25 on their forms. But at odd times we will add an extra word

1 or two to help with the general public to understand what
2 that power plant really is. So with regard to the Campbell
3 cogeneration, the word "soup" was added. Locally we kind
4 of knew that this is a Campbell Soup cogeneration facility.
5 And we knew that a lot of the thermal output from the plant
6 was going next door to the soup processing facility. So it
7 wasn't meant as obfuscation it was meant to basically
8 enable better clarification of what these things mean.

9 You know, SPA is how SMUD reports on one of their
10 power plants as the Sacramento Power Authority. It's the
11 same with SCA, the Sacramento Cogen Authority. These
12 things aren't really known to the general public if we
13 strictly went by the book as to the exact name. So
14 internally we try to maintain aliases so that when staff
15 and other organizations are talking and discussing about
16 these power plants we don't force a code onto them, we kind
17 of look at what and how we're dealing with internally. And
18 then have all these sort of linkages to try to understand
19 what people are talking about in the larger context.

20 So that's really where the QFER database is
21 coming from. And bottom line we strive to improve,
22 absolutely. We will take these name changes and
23 incorporate them. Again, it's a process. And at any given
24 point in time things change. I hope I haven't overstated
25 things, but that's my comment.

1 COMMISSIONER DOUGLAS: All right, thank you.
2 That's incredibly helpful. And I know exactly what you
3 mean in terms of the challenge between the ISO tracking one
4 grid connection and us having plants, that it may have been
5 brought to us in two separate proceedings, and just the
6 real-world information being different depending on where
7 it comes from. And then trying to organize that into a
8 database.

9 I just wanted to ask Lisa DeCarlo if you wanted
10 to speak any further on the Title 20 sections that were
11 raised?

12 MS. DECARLO: Sure, thank you. And thank you,
13 Michael, for that great explanation about the underlying
14 concern that Mr. Uhler has raised.

15 I just wanted to emphasize a statement Elizabeth
16 made in her presentation, and a statement Commissioner
17 Douglas made in the previous item, which is that the issue
18 before you is really an interpretation of 1769(b), which
19 governs a change of ownership. And as Elizabeth mentioned
20 previously, that determination does not require us to weigh
21 in on whether this project is compliant with any of the
22 sections Mr. Uhler has sited, 1770 or 1304. 1770 is a
23 compliance verification provision that just establishes the
24 Energy Commission's compliance program to ensure continued
25 compliance with Conditions of Certification. And 1304, as

1 we have heard a copious discussion of, is the QFER
2 reporting requirements.

3 So really what's before you Commissioners right
4 now is an analysis of whether this project change satisfies
5 the 1769 (b) requirements. And as Elizabeth stated, staff
6 has found that it does and recommends approval along those
7 lines.

8 COMMISSIONER DOUGLAS: Super. Thank you, I
9 really appreciate that.

10 I think Chair Hochschild I'm prepared to make a
11 motion if there are no more questions here.

12 CHAIR HOCHSCHILD: That'd be great. Could you
13 please move Item 4?

14 COMMISSIONER DOUGLAS: Yes, I move Item 4.

15 CHAIR HOCHSCHILD: Commissioner Monahan, would
16 you be willing to second?

17 COMMISSIONER MONAHAN: I second this item.

18 CHAIR HOCHSCHILD: All in favor say, Commissioner
19 Douglas?

20 COMMISSIONER DOUGLAS: Aye.

21 CHAIR HOCHSCHILD: Commissioner Monahan?

22 COMMISSIONER MONAHAN: Aye.

23 CHAIR HOCHSCHILD: Commissioner McAllister?

24 COMMISSIONER MCALLISTER: Aye.

25 CHAIR HOCHSCHILD: Commissioner Gunda?

1 COMMISSIONER GUNDA: Aye.

2 CHAIR HOCHSCHILD: And I vote aye as well. Item
3 4 passes unanimously.

4 Let's turn now to Item 5, Lithium Valley. This
5 presentation is going to be made by my Summer Fellow Lauren
6 Illa, who's been a total gem. We were so lucky to have you
7 this summer working on this issue. And so I want to say
8 thank you too for your contributions in December. My
9 regret is that this was not an in-person fellowship, so
10 this is all virtual. And I am committed to taking out to
11 lunch every Summer Fellow we have in our office. And I
12 promise to do that when I come down to Stanford next or
13 when you're able to come to Sacramento.

14 I do want to thank Stanford University for
15 supporting the whole program, which began with the Energy
16 Commission and kind of grew to include a number of other
17 agencies, CARB and PUC and CAISO and a bunch of others.
18 And it's really, I think, a tremendous opportunity for
19 young people.

20 And of course it can be a life-changing career
21 opportunity. I am so proud of my Senior Advisor Terra
22 Weeks, who got her start at the Energy Commission in a
23 summer in our office and then has been doing tremendous
24 work on SB 100 and many other things, including Lithium
25 Valley since then. So, Lauren, it's a pleasure to

1 introduce you. Thank you for all you did, and look forward
2 to your presentation.

3 MS. ILLA: Thank you so much for the wonderful
4 introduction. So good morning, Chair Hochschild and
5 Commissioners. My name is Lauren Illa. I am a sophomore
6 at Stanford University. And like Chair Hochschild said I
7 interned in his office over the summer. During my
8 internship I primarily worked on the team developing the
9 report for the Lithium Valley Commission. For my
10 informational item today I will talk a bit about the
11 research that I did on the potential for lithium recovery
12 in California. Next, please.

13 We have seen a real surge and a global demand for
14 lithium and this has mainly been due to transportation
15 electrification. EVs had a market growth of 1.7 million
16 vehicles in 2020. But that number is expected to swell to
17 60 million vehicles by 2040.

18 Additionally, California instituted policies to
19 get the state to 100 percent clean electricity. The Senate
20 Bill 100 Report that was released earlier this year found
21 that California will require significant increases in
22 battery storage to achieve this goal. And the increases in
23 battery storage are shown in dark purple. The accelerating
24 growth of EVs and California's battery storage additions
25 will require an increased supply of lithium. Next, please.

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1 Currently two forms of lithium extraction and
2 recovery dominate the market. Next, please.

3 The first, accounting for about 54 percent of all
4 lithium compounds produced, is hardrock mining, which
5 occurs primarily in Australia. The largest operation in
6 the world is at the Greenbushes open-pit mine in Western
7 Australia. And that's a picture of it there on the screen.
8 Hardrock mining involves the mining of granite pegmatites
9 containing lithium.

10 The granite pegmatites undergo several physical
11 and chemical separation processes to result in a very
12 concentrated lithium solution. This solution can then be
13 refined into lithium hydroxide or lithium carbonate for use
14 in batteries. However, this process can cause some severe
15 ecological damage to the site and also to the surrounding
16 land. Additionally, the separation processes are extremely
17 energy intensive. Next, please.

18 Virtually all other lithium produced comes from
19 large evaporation ponds in desert climates, particularly in
20 Argentina, Bolivia, and Chile. This extraction process
21 requires the drilling of wells into salar brine deposits in
22 the earth's crusts. These brine deposits are then pumped
23 into evaporation ponds that can span thousands of acres and
24 the brine is left there for months or for years until most
25 of the water content has evaporated from the solution.

1 This solution then undergoes further treatment to produce
2 the desired end-products of lithium hydroxide or lithium
3 carbonate.

4 This process can be extremely water-intensive, at
5 times requiring millions of liters of water per metric ton
6 of lithium carbonate or lithium hydroxide produced in
7 regions that already have limited water access, which can
8 put a large strain on local farming communities. Next,
9 please.

10 The lithium reserve in the Salton Sea region is
11 very different. The main lithium reserves in the Salton
12 Sea Known Geothermal Resource Area are where lithium is
13 concentrated in geothermal brine reservoirs below the
14 Salton Sea. Next, please.

15 Something interesting that I learned during my
16 research was that the composition of the brine at the
17 Salton Sea is unique to the region. It's about 26 percent
18 dissolved solids and has an average lithium concentration
19 of 200 milligrams of the lithium per kilogram geothermal
20 brine. And in some areas this concentration can be as high
21 as 400 milligrams per kilogram making these, the geothermal
22 brine reservoirs, with the highest concentration of lithium
23 in the world. Next, please.

24 Due to these concentrations, the Salton Sea
25 geothermal field, which includes the Known Geothermal

1 Resource Area has a potential inferred resource of 15
2 million metric tons of lithium. According to a March 2020
3 CEC report, the entire Salton Sea Geothermal Field can
4 produce more than 600,000 tons of lithium carbonate per
5 year once it's fully developed. This is much greater than
6 the amount of lithium carbonate that was produced globally
7 in 2018, which exceeded 300,000 metric tons.

8 This really provides an ample opportunity for
9 lithium recovery from geothermal fluid that would make the
10 U.S. a significant producer of lithium and reduce reliance
11 on imports from other countries. However, the methods that
12 I've reviewed so far are not environmentally sustainable or
13 suitable for the lithium resource in Imperial Valley, so
14 researchers and companies have developed several techniques
15 for directly extracting this lithium from geothermal brines
16 that are already being used to produce electricity at
17 geothermal power plants in the region. Next, please.

18 The first of these methods is adsorption. So
19 adsorption is the process of physically adsorbing or
20 attaching lithium chloride molecules that are present in
21 brine onto a material called a sorbent. These lithium
22 chloride molecules can then be recovered and the sorbent
23 can be regenerated for repeated use.

24 This extraction process is actually not new. A
25 lithium company called Livent has been using a direct

1 lithium extraction process to produce lithium carbonate at
2 its facilities in Chile since 1996. Next, please.

3 Another method, ion exchange, is being tested at
4 Salton Sea geothermal brines. So in ion exchange
5 processes, lithium ions that are present in the geothermal
6 brine are adsorbed into these ion exchange sites. And then
7 these lithium ions are chemically swapped for another ion
8 that is already present within the ion exchange. After the
9 lithium ion is chemically adsorbed an acid solution is used
10 to strip and recover this lithium.

11 A research group from SRI International, through
12 a grant from the CEC's EPIC program, developed this
13 inorganic sorbent made of nanostructured hydrous manganese
14 oxide. On the left is a picture of the sorbent without the
15 lithium ions present and on the right is the sorbent after
16 the lithium ions have been adsorbed and then entered the
17 ion exchange sites. Next, please. One more click,
18 please.

19 A review of these projects indicates that
20 expected operating expenses are near about \$4,000 per
21 metric ton of lithium carbonate equivalent. This
22 production cost is economically feasible with estimated
23 lithium prices greater than or equal to about \$11,000 per
24 metric ton of lithium carbonate equivalent. Next, please.

25 In comparison, the production costs from the

1 evaporative brine processing averages about \$5,500 per
2 metric ton of lithium carbonate equivalent. And the
3 production cost from the hardrock mining ranges from \$4,500
4 to \$5,000 per metric ton. This makes the production cost
5 lithium products from geothermal brines at the Salton Sea
6 comparable to or less expensive than other methods. Next,
7 please.

8 The technology developed by SRI International
9 will be tested at demonstration facilities in the Salton
10 Sea region and several of these facilities have received
11 CEC funding, including a demonstration project from
12 Berkshire Hathaway Energy Renewables, which uses an ion
13 exchange technology in addition to a molecular sieve. A
14 pilot plant from Controlled Thermal Resources, which will
15 demonstrate the management and precipitation of other
16 compounds that are present in the Salton Sea geothermal
17 brines that could potentially interfere with the ability of
18 the company to extract lithium from these geothermal
19 brines. And lastly, a pilot plant from Materials Research,
20 which will also demonstrate the pilot-scale recovery of
21 lithium from geothermal brines. Next, please.

22 Thank you for your time and providing me with the
23 opportunity to speak about my work. I also wanted to thank
24 my mentors over the course of my internship, Terra Weeks,
25 Le-Quyen Nguyen, and Pam Doughman for providing me with so

1 much support and guidance as well as my faculty mentor from
2 Stanford, Dr. Diana Gragg. That concludes my presentation.
3 I will gladly answer any questions that you may have.

4 CHAIR HOCHSCHILD: Thank you so much, Lauren.
5 Before I ask a question are there any other Commissioners
6 wishing to ask a question of Lauren?

7 COMMISSIONER DOUGLAS: Chair Hochschild --

8 CHAIR HOCHSCHILD: Go ahead.

9 COMMISSIONER DOUGLAS: -- this is Commissioner
10 Douglas, not a question but I very much appreciate the
11 presentation. And I'm looking forward to hearing your
12 questions.

13 CHAIR HOCHSCHILD: Yeah, did I hear Commissioner
14 McAllister and was that Commissioner Gunda?

15 COMMISSIONER MCALLISTER: Yeah, go ahead.

16 COMMISSIONER GUNDA: Yeah, I just wanted to say
17 the same thing. I mean I've been trying to get kind of an
18 overview of our work in the Lithium Valley, so this is
19 great. Lauren, it's a bummer that we haven't got a chance
20 to see you in-person, but it's a great presentation. Thank
21 you for walking us through the options. And I'm grateful
22 for your service to the state. And I don't have any other
23 questions. It was very informative. Thank you, Chair.

24 CHAIR HOCHSCHILD: Thank you, Commissioner Gunda.
25 Oh yeah, Commissioner Monahan go ahead.

1 COMMISSIONER MONAHAN: Also not a question, but a
2 comment. I can't believe you're only a sophomore
3 undergraduate. You did a tremendous job. I never would
4 have been as brave at your age to be able to do that and
5 that was a great presentation, so just thank you. It looks
6 like you have a great career in front of you. And maybe
7 one day you'll settle back at the Energy Commission for a
8 bit.

9 CHAIR HOCHSCHILD: Yes, yes. I do have a -- oh,
10 go ahead Commissioner McAllister, yeah.

11 COMMISSIONER MCALLISTER: Yeah, it's already
12 been said but I wanted to pile on, I mean nice job. Just
13 the confidence and just competence just comes right
14 through. So no doubt you have a great, great future.
15 Please stay in the energy business in one way or another.
16 Clearly you're going to get well engaged with it, so thanks
17 a lot.

18 And I just wanted to echo your comments, Chair,
19 about the program itself, the partnership we have with
20 Stanford to bring really excellent, quality fellows over to
21 do important work for the state. Welcome to the team,
22 thank you very much.

23 CHAIR HOCHSCHILD: So, Lauren, I did have a
24 question for you. I mean, I do think lithium should be
25 thought of as sort of the oil of the clean energy future.

1 And we're so geographically very fortunate to have this
2 enormous resource here in a form that is by far the most
3 benign in the world to recover in terms of its impacts and
4 then also the cost as your outline there.

5 I am wondering just what you see in terms of our
6 ability to scale this rapidly? What barriers are there and
7 any particular areas of future R&D needs that you see?

8 MS. ILLA: Yeah in terms of ability to scale, so
9 a lot of the companies that already operate geothermal
10 plants in the region are planning these demonstration
11 projects. And they're thinking the throughput will be
12 about 20,000 tons per year of lithium. And that can be
13 translated into maybe about 100,000 tons per year of
14 lithium carbonate equivalent or other end products. And so
15 the plan eventually is to scale this up to 600,000 tons per
16 year of lithium carbonate equivalent.

17 But that's dependent on further geothermal plants
18 being built in the area. It's also dependent upon maybe
19 the future prices of lithium in the future and how this
20 will affect the demand and also competitiveness of
21 extraction from geothermal brines, as well as whether the
22 technology is suitable or ready for this kind of commercial
23 scale-level development.

24 So I think once the demonstration projects show
25 the potential for producing lithium at the current

1 operating expense costs of about \$4,000 per metric ton,
2 there is a good chance that we'll be able to be more
3 commercially viable and competitive with our new existing
4 methods.

5 CHAIR HOCHSCHILD: Uh-huh, yeah. Well, in
6 closing I thank you for that. I would just like to say I
7 think this Lithium Valley vision is one of the single most
8 important and exciting things that we're doing at the
9 Energy Commission. And there's a straight line from this
10 to manufacturing as well, because there are a lot of
11 battery companies that are going to be opening up shop. We
12 are seeing huge demand, both for electric vehicles and for
13 energy storage. And the vision of Lithium Valley, not just
14 to recover the raw material here in California, but to fill
15 in the rest of that value chain in California, cathode
16 manufacturing in particular, which we don't have much of.
17 But I think it's a huge opportunity to bring that here.
18 It'd be close to market and close to the electric vehicle
19 manufacturers that are here and are growing.

20 And this is just a really terrific piece of work,
21 Lauren, you've done to help set the table for all that. So
22 we'll be in touch, I promise to take you out to lunch when
23 I come to Stanford. And I look forward to being in touch
24 with you going forward, thanks again.

25 MS. ILLA: Thank you, Chair and Commissioners.

1 CHAIR HOCHSCHILD: All right, terrific. This was
2 a non-voting item, so we will not take public comment on
3 Item 5. And we can turn now to Item 6, Overview Of Market
4 Informed Demand Automation Server, MIDAS.

5 MS. SHEPHERD: Okay. Good morning, Chair and
6 Commissioners. My name is Morgan Shepherd and I am an
7 Energy Analyst in the Efficiency Division, Data and
8 Analytics Office. Today I am presenting on an
9 informational item on the Market Informed Demand Automation
10 Server system, otherwise known as MIDAS, a database that
11 stores time-varying rates, greenhouse gas emissions, and
12 California ISO Flex Alerts to support decarbonization and
13 grid reliability efforts.

14 Before diving into MIDAS I would like to review
15 the benefits MIDAS will provide to Californians and some
16 background information on the project. Next slide.

17 Potential benefits to Californians as a result of
18 the implementation of MIDAS include decreased emissions
19 through load shifting, increased grid reliability through
20 improved customer awareness of Flex Alerts, which then
21 decreases strain on the grid during these events. And
22 finally, the MIDAS system would contribute to customer
23 savings through decreased energy usage during peak hours.
24 Next slide.

25 Currently there are periods of the day when

1 carbon free renewables are unavailable for electricity
2 generation, such as when the sun is not shining or the wind
3 is not blowing. This results in steep evening ramping and
4 the generation from fossil-fuel power plants to meet state
5 energy demands. These hours are referred to as carbon-
6 intensive hours, because they rely on the use of high-
7 carbon peaking plants.

8 This graphic illustrates the 2021 Marginal
9 Emissions Intensity for each hour down the left side, and
10 month of the year across the top, with high-carbon hours
11 shown in red and low-carbon hours shown in green.

12 Renewables alone are not enough. To minimize
13 emissions more effectively California must shift
14 electricity use from the carbon-intensive hours to low-
15 carbon hours. This can be done with energy storage in the
16 form of electrical generation in batteries, thermal energy
17 in air and water heating and cooling, and potential energy
18 in water pumping.

19 Through published price and emissions signals
20 California can enable, facilitate, and incentivize
21 industry, businesses and residents to shift their energy
22 use to hours when carbon-free renewable resources are
23 available. Next slide please.

24 To shift energy usage to low-carbon hours CEC
25 staff have created the MIDAS platform, which supports the

1 entry and retrieval of electricity price schedules, Flex
2 Alert signals, and greenhouse gas emissions. Each rate and
3 value in the system will require a unique ID to identify
4 and link customer devices to the correct electricity rate.
5 This unique identifier, what we call the Rate
6 Identification Number or RIN, is scalable to a national or
7 even international level, allowing for other regions to use
8 our design.

9 The database includes two primary tables: the
10 RateInfo and Value Tables. The RateInfo Table includes all
11 identifying information for each rate plan, specifically,
12 the information that makes up the RIN associated with each
13 rate.

14 The Value Table includes all information
15 describing when each rate applies and how much it costs or
16 as it applies to Flex Alerts and greenhouse gas emissions,
17 the Value Table stores the values associated with those
18 signals.

19 Under a proposal in the draft Load Management
20 Standards staff report utilities and community choice
21 aggregators would be responsible for uploading all of their
22 time-varying electricity prices to populate the MIDAS
23 database. Next slide.

24 The MIDAS teams have completed Alpha and Beta
25 testing with over 20 outside stakeholders, including

1 utilities and automated service providers. Time of Use
2 rates from five utilities have been uploaded and are
3 available on the database. Real-time marginal greenhouse
4 gas emission signals from California's Self-Generation
5 Incentive Program and Flex Alert signals from the
6 Independent System Operator have both been incorporated
7 into the MIDAS system.

8 And most recently we held a public workshop on
9 August 27th to share, explain, and gather feedback from the
10 public and stakeholders on the database. As part of the
11 public workshop a limited-MIDAS system has been released
12 and is available for public testing and evaluation. As
13 this is a limited release we encourage input. Next slide,
14 please.

15 Our next steps include reviewing comments and
16 input on the limited-MIDAS system. The comment deadline is
17 September 15th, 2021. Continuing to coordinate with other
18 CEC staff on the Load Management Standards staff report and
19 the related promulgation of Load Management Standards;
20 flexible demand appliance standards and FlexHub research
21 and pilots.

22 Next, continuing to gather locational hourly data
23 to better represent the locational portion of the RIN.
24 Analyzing public broadcast signal options to reach
25 California's not currently connected demand response

1 resources and those without internet access.

2 Finally, I would like to thank Karen Herter who
3 has been a thought leader at the CEC for the past two
4 years, helping shape the draft Load Management Standards
5 staff report. And for designing the MIDAS system, paving
6 the way for this load management project. That concludes
7 my presentation. Thank you for your time. I will now take
8 questions.

9 CHAIR HOCHSCHILD: Thank you. We'll turn now to
10 Commissioner discussion, but let me first say this is
11 terrific. And I also appreciate the good acronym. We've
12 had a lot of terrible acronyms for our programs in the
13 past, so I'm always appreciative of the MIDAS. The MIDAS
14 touch here is, again, a good one. And thank you for all
15 your work.

16 Let's turn now if we could to Commissioner
17 McAllister.

18 COMMISSIONER MCALLISTER: Great. Thank you,
19 Chair.

20 And thank you, Morgan, for that great overview.
21 I want to second your thanks to Karen Herter who really has
22 provided just the vision and also just the heavy lifting
23 and coordination to get this moving in the context of the
24 Load Management Standards. And this, I'm super-excited
25 about this. It's been a little bit under the radar just

1 because we want to deliver the goods via the Load
2 Management Standards proceeding.

3 But I think as it becomes more public and more
4 used, and after developers figure out what a facilitated
5 platform it is for enabling these business models, they're
6 going to go out there and harness load flexibility based on
7 all the signals that Morgan mentioned. So that's rates
8 primarily, that's tariffs, right? Time-dependent tariffs,
9 but it's also Flex Alerts which have a very firm time
10 dependence. Because they are a time-dependent resource, by
11 definition.

12 And carbon signals, which many Californians are
13 interested in using to help influence their actions. They
14 want to respond to the carbon intensity of the grid. And
15 we know that through the self-gen program, but suspect it's
16 probably a broader phenomenon.

17 And so I really want to thank you, Morgan and
18 Karen, but also Gavin Situ, Gabe Taylor, Jen Nelson as
19 well, and really the whole team in the Efficiency Division
20 and the support they've gotten from across the Commission.

21 I wanted to frame for my colleagues a little bit
22 Load Management Standards more broadly. The MIDAS tool is
23 a platform for enabling Load Management Standards authority
24 to be implemented a way that really does reduce transaction
25 costs and focus on the right things as we transition our

1 grid to low carbon. But the broader Load Management
2 Standards authority has existed since the beginning of the
3 Energy Commission.

4 And really I think of it now as really one of the
5 three standards-making processes that are authorities that
6 the Commission has. And we know the big two up to now,
7 which have been the Building Standards and the Appliance
8 Efficiency Standards, but the Load Management Standards
9 really deserve to be in that triumvirate. And they were so
10 visionary when they were included in the Warren-Alquist Act
11 back in the 70s originally.

12 But now we're in the digital age. We have
13 automation, we have AI, we have all of these tools in our
14 toolbox that we didn't have and really were just not even
15 imagined 45 years ago. So it's exciting to be where we are
16 now. We really can build low-cost tools to enable a
17 nimble, flexible grid that primarily this tool and the Load
18 Management Standards will preserve and what will serve to
19 enhance reliability in the grid long-term as we move
20 towards a zero-carbon grid. These will reduce costs,
21 demand response, and really taking advantage of all the
22 potential of load flexibility. It'll reduce costs and
23 it'll enhance reliability. And so that, the long-term play
24 is really that.

25 In the meantime, as we facilitate decarbonization

1 I think it also plays, as Morgan described a role there.
2 So MIDAS is, I think a real transformational tool. We
3 already know that app developers are looking at it and then
4 putting it through its paces and the rollout of it gets
5 done very well. So digitization of our energy grid is
6 happening.

7 And those of us who've been involved in this
8 business a long time have heard for decades that the
9 marketplace needs automated access to rate information.
10 And not just in the moment but ahead of time so that they
11 can plan, so they can do pre-cooling of buildings, so that
12 they can really get their resources and their resource
13 stack in place for the following day, and the following
14 periods of time that are relevant.

15 And so this tool is going to enable all that in a
16 very low-cost, accessible sort of democratic way. And so
17 that's why I'm so excited about it. And I think it just
18 plugs into all of the different things that we're doing and
19 load flexibility, there's a half dozen activities that all
20 complement one another and this is a real enabler for all
21 of that.

22 So I also wanted to call out our collaboration
23 around these issues with the Public Utilities Commission
24 and the CAISO, because the PUC is developing some really
25 interesting and important initiatives around demand

1 response and rate-making, which at the end of the day this
2 facilitates primarily time-dependent rates and their
3 application in a way that makes sense, with the
4 marketplace. And obviously the CAISO is really interested
5 in it for their Flex Alerts. And really we now with all of
6 our data activity will be in a position of quantifying the
7 impacts of all of these informational tools and how
8 consumers and loads of all sizes respond to them.

9 And so I think there's just so many reasons to
10 like this and just recognize that it's time has come. We
11 at the Energy Commission back for decades, there's been a
12 real interest in a center of excellence or a center of
13 intellectual leadership on the potential for rates-driven
14 behavior change and rates-driven impact, positive impacts
15 on loads and loads shaping. And in the analog era it was
16 just tougher and more costly to do that. And now that
17 we're in a different space it's time to modernize this long
18 long-standing monopoly kind of sector and really bring
19 these sort of creative tools to it in a way that responds
20 to the market needs and customer needs. And so we're just
21 in a great place right now.

22 And I wanted to just highlight finally, the
23 possibility, and I think Morgan sort of intimated this, but
24 we know that the ERDD, through the R&D activities will have
25 a lot to work with leveraging this, these new business

1 models, and figuring out how they can benefit ratepayers.
2 And so I'm really interested in sort of all these parallel
3 discussions and activities that we have the opportunity to
4 really get deep into and produce results that optimize the
5 grid for all Californians.

6 So anyway this is an enabling platform, a tool
7 and I'm really thankful to Morgan and the team for
8 presenting it today. And certainly looking forward to
9 moving forward with our formal rulemaking on Load
10 Management Standards and all the different parallel
11 activities that we have going with both here at the
12 Commission and across our sister agencies.

13 So I wanted to just set that that context and why
14 I think it's important to have this informational item, to
15 bring it to everyone's attention and kind of contextualize
16 it because it is very, very important. So thank you,
17 Morgan and the whole team.

18 CHAIR HOCHSCHILD: Thank you, Commissioner. And
19 yeah, I really appreciate you bringing this as an
20 informational item.

21 Morgan, was there anything else you wanted to add
22 in response to what the Commissioner said?

23 MS. SHEPHERD: No, I think he hit all of the
24 major points of the importance of this system and Load
25 Management Standards in general. But yeah, thank you for

1 summarizing that and putting it into a different phrasing
2 for everyone. It definitely has been flying under the
3 radar and is a lot. Many of the stakeholders that we
4 talked to during alpha and beta testing are very excited
5 about this and testing it continually, and continue to stay
6 excited about it, so it's very rewarding to see everyone
7 (indiscernible).

8 CHAIR HOCHSCHILD: That's great to hear, that's
9 great to hear. Unless there are other Commissioner
10 comments --

11 COMMISSIONER MCALLISTER: I left one person out
12 actually, David Cuffee, I wanted to thank as well.

13 CHAIR HOCHSCHILD: Oh, yeah.

14 COMMISSIONER MCALLISTER: And our team includes
15 IT and a number of skill sets across the Commission. So
16 Karen was very successful in marshaling all those skill
17 sets and making sure that we were kind of on point with a
18 really highly qualified team to do this, so thank you
19 again, Morgan and everyone.

20 CHAIR HOCHSCHILD: Great. Commissioner Gunda.

21 COMMISSIONER GUNDA: Yeah, thank you, Chair. As
22 always it's really hard to follow Commissioner McAllister.
23 I think he really helped contextualize the piece.

24 I just want to extend my thanks to Morgan.
25 Morgan, that was an excellent presentation. Thank you for

1 keeping it clear and succinct for our broad audience here.
2 I also want to thank the Efficiency Division. I had the
3 chance to kind of get debriefed on this over the last
4 several months, so I kind of understand the broad vision.

5 I do want to flag kind of like two things that
6 are important from a resource planning perspective. As
7 we've all kind of seen the analysis from SB 100 the load
8 flexibility has an incredible opportunity in terms of
9 reducing the overall build on the resource side, on the
10 bulk side. So I think load flexibility and demand
11 flexibility, just generally play an extremely important
12 role in optimizing our ability to reduce the overall build
13 rate; I think that's one.

14 But also the other element of it, which we're
15 going to talk about today a little bit in our contingency
16 planning, is so much of the shocks from climate change, the
17 extreme situations that we might see really require a solid
18 demand response and solid ability to respond to demand in
19 real time. And I think a platform like this really allows
20 for realizing those opportunities, both on the resource
21 planning side as well as contingency planning side.

22 So I think I am personally excited from that
23 perspective of this becoming, as Commission McAllister put
24 it, an enabler for a broad suite of applications. But like
25 when we had the Apple iTunes right, I mean, you develop a

1 platform and the apps take over. You double up the data
2 and the apps take over. And I think the value stream and
3 the value proposition that we might realize here might not
4 even be completely visible at this point. So I'm just
5 incredibly grateful for this general direction.

6 And I would love to follow the comments. I think
7 as with any data project it's extremely important to enable
8 as many stakeholders as we can, so I look forward to
9 hearing the stakeholder comments and how we really develop
10 a robust process to support kind of the equity portion of
11 this transition as well. Thank you.

12 CHAIR HOCHSCHILD: Thank you, Commissioner Gunda.

13 Unless there are additional Commissioner
14 comments, Morgan, congrats to you and to Karen Herter and
15 the whole team on the progress here, really appreciate it.

16 And by the way, let me just say it's really nice
17 just to do these kind of informational updates like we just
18 did on Lithium Valley and on MIDAS. Even when there is not
19 a Commissioner vote that's required it's just helpful to
20 everybody to calibrate and have a little chance for some
21 dialogue. And for some congratulations, which are always
22 in order when we're making progress like this, so thank you
23 Morgan and team.

24 And with that now let's move on now to Item 7,
25 Public Domain Residential and Nonresidential Compliance

1 Software and the Residential and Nonresidential Alternative
2 Calculation Method. That is a mouthful, okay.

3 MR. WICHERT: Yes, it's a mouthful.

4 Good morning, Chair and Commissioners. My name
5 is RJ Wichert and I'm a Mechanical Engineer in the Building
6 Standards Office in the Efficiency Division.

7 I'm here to ask for your approval for updated
8 2019 public domain residential and nonresidential
9 compliance software, CBECC-Com and CBECC-Res, version 2019
10 2.0, and the associated residential and nonresidential
11 Alternative Calculation Method, or ACM, Reference Manuals.
12 Next slide, please.

13 If approved this CBECC update will benefit
14 California by expanding the list of available efficiency
15 measures in the software, giving the building industry more
16 tools in the push for building decarbonization. This
17 update also corrects inaccuracies contained in the
18 currently approved software, which will better align
19 simulated energy savings with real world buildings. Next
20 slide, please.

21 For CBECC-Res and Com this update contains
22 corrections to the baseline indoor air quality, or IAQ
23 system, including revisions to the baseline fan efficacy,
24 maximum airflow rate, and compliance credit installation
25 criteria.

1 For CBECC-Com, this update also includes a
2 revised baseline system for high-rise residential spaces,
3 changing the baseline from a four-pipe fan coil to a single
4 zone air conditioner.

5 Because of these major updates we're asking that
6 approval of previous versions of CBECC and third-party
7 compliance software incorporating those versions be expired
8 90 days after the new software is available to the public.

9 In addition to the major updates this software
10 also includes new demand responsive heat pump water
11 heaters, an expansion of heat pump water heater options
12 including Tier 4 and large commercial options, various bug
13 fixes, and for CBECC-Com updating the simulation engine to
14 EnergyPlus 9.4. Next slide, please.

15 Staff has thoroughly tested CBECC-Res and Com
16 2019 2.0, reviewed the associated ACM Reference Manuals,
17 and is recommending approval of the resolutions on this
18 item to ensure that the building industry has accurate and
19 well-maintained compliance software. Thank you and I'm
20 available to answer any questions you may have.

21 CHAIR HOCHSCHILD: Thank you so much.

22 Is there public comment on Item 7?

23 MS. GALLARDO: Hello, this is Noemi, the Public
24 Advisor. Apologies, I had technical issues earlier, which
25 is why I wasn't able to respond and I'm very grateful

1 Dorothy had stepped in.

2 So a reminder to attendees, if you would like to
3 make a public comment please use the raise-hand feature to
4 indicate that you are wanting to make comment, press *9 if
5 you are on by phone. And I do see one hand raised, it
6 looks like Sarmad Jabbar, (phonetic) apologies if I
7 mispronounced that. Please restate your name, spell it,
8 and indicate your affiliation for the record. Your line is
9 open and you may begin. (No audible response.) Sarmad,
10 your line is open. You may begin. And do not forget to
11 unmute on your end.

12 Okay I'm not getting a response, Chair, so I --
13 oh, I see a second hand. So I'm going to move to the
14 second person, which is a Luke Martin. Luke, a reminder to
15 spell your name, indicate your affiliation if any. Your
16 line is open and you may begin.

17 MR. MORTON: Hi, yeah my name is Luke Morton
18 calling from CABEC, Luke L-u-k-e, Morton M-o-r-t-o-n. I'm
19 calling on behalf of the California Association of Building
20 Energy Consultants. I'm just calling to support this item.
21 I very much -- I had a conversation or I commented on the
22 draft changes and had follow-up from staff. And I was
23 really impressed with the work they're doing, with the
24 changes being proposed. And kind of there's a lot of work
25 still ongoing, but I was really impressed with -- on behalf

69

1 of staff. And so just want to support all the work that's
2 going on with these updates. That's it.

3 MS. GALLARDO: Thank you.

4 All right, I do not see any other hands. Chair,
5 we can proceed.

6 CHAIR HOCHSCHILD: Okay, thank you. Let's turn
7 to Commissioner McAllister.

8 COMMISSIONER MCALLISTER: Great. Well, thank you
9 very much. Thank you, RJ, I want to just call out you in
10 particular, with the whole team behind this. There are
11 lots of technical issues here and we have so much expertise
12 across the Efficiency Division and the whole team on both
13 CBECC-Com and Res that really do pitch in. It kind of
14 takes a village to develop and maintain these tools.

15 And so just to be clear this is an update for the
16 2019 compliance software. And we're also pivoting as a
17 team to begin to develop the modifications to reflect the
18 2022 update that we voted on last month. But these are
19 changes that are significant enough that they are not just
20 sort of minor changes that staff can just promulgate. We
21 really need to take this and adopt it here. But yeah, lots
22 of stakeholder engagement. And I think you heard the one
23 commenter be appreciative of that process, so I think it
24 certainly has my support.

25 I wanted to also thank Mazi Shirakh and Danny Tam

1 and Payam Bozorgchami for their leadership on this and just
2 marshalling all the stakeholder engagement. And then Che
3 Geiser as well and Will Vicent who oversees a lot of this
4 activity as the lead of the Building Standards Office. And
5 then Mike as well as the Lead of the Division. I know that
6 the Building Standards is such a core part of what we do
7 and we just have a dedicated, long-term staff here who has
8 a depth of knowledge that is unparalleled. So I just want
9 to acknowledge that, and thanks to you RJ and the whole
10 team.

11 CHAIR HOCHSCHILD: Great. Thank you.

12 Well unless there are Commissioner comments,
13 Commission McAllister, would you be willing to move the
14 item?

15 COMMISSIONER MCALLISTER: Yes, I move Item 7.

16 CHAIR HOCHSCHILD: Commissioner Gunda, would you
17 be willing to second?

18 COMMISSIONER GUNDA: Second Item 7.

19 CHAIR HOCHSCHILD: Okay. All in favor say aye,
20 Commissioner McAllister?

21 COMMISSIONER MCALLISTER: Aye.

22 CHAIR HOCHSCHILD: Commissioner Gunda?

23 COMMISSIONER GUNDA: Aye.

24 CHAIR HOCHSCHILD: Commissioner Douglas?

25 COMMISSIONER DOUGLAS: Aye.

1 CHAIR HOCHSCHILD: And then Commissioner Monahan?

2 COMMISSIONER MONAHAN: Aye.

3 CHAIR HOCHSCHILD: And I vote aye as well. Item
4 7 passes unanimously.

5 Let's turn now to Item 8, Revised Summer of 2022
6 Stack Analysis.

7 MS. TANGHETTI: Hello to our Chair, Commissioners
8 and stakeholders. I am returning today to provide an
9 update to the Draft 2022 Summer Stack Analysis based on
10 updated assumptions and comments from stakeholders. The
11 stack analysis is based on a spreadsheet tool that uses CEC
12 hourly demand and supply projections during critical hours
13 for the current or near-term year. The analysis presented
14 here today provides insight into the quantity and duration
15 of trigger contingencies that may be needed for summer of
16 2022 under extreme weather conditions. Next slide.

17 The benefit to California of the CEC Stack
18 Analysis should be viewed as a point of reference for
19 consideration in electricity grid reliability planning.
20 Oh, I think we skipped a slide. Can you go back a slide,
21 please? Oh, I think we're missing a benefit slide.
22 Apologies for that, but there is a benefit slide added to
23 it. And we'll provide that at a later time. So go ahead
24 and go to that next slide there. Sorry about that.

25 First I'd like to briefly outline some analytics

1 products the CEC staff has recently developed to benefit
2 planning processes for various time horizons and
3 assumptions. Next.

4 On August 30th CEC staff presented the Midterm
5 Reliability Analysis, also referred to as the Loss of Load
6 Expectation, or MTR analysis. The LOLE analysis compiled
7 the results for thousands of combinations assumptions for
8 the years 2022 through 2026.

9 The stack analysis tool is designed to consider
10 an extreme weather event, such as events have served in the
11 summer of 2020, as well as the current drought. The stack
12 analysis tool is designed to understand an extreme weather
13 event and the potential impact on supply-and-demand for a
14 single or near-term year.

15 The LOLE analysis considers thousands of
16 combinations of historic supply and demand levels over
17 multiple years. These analyses should be viewed as
18 complements to each other and valuable points of reference
19 for energy reliability planning. Next.

20 Pacific Gas and Electric, Middle River Power and
21 Southern California Edison provided very thoughtful written
22 comments. The next two slides highlight a few of the
23 themes that carried through most of these written comments.
24 Commenters questioned the need for both a probability-based
25 LOLE analysis and an hourly stack analysis.

1 As noted on the last slide on August 30th, the
2 CEC's preliminary Midterm Reliability analysis was
3 presented, and is provided as part of the IEPR record.
4 Again, both the stack and midterm reliability LOLE analysis
5 should be viewed as complementary to the other and
6 considered as points of reference in electricity
7 reliability planning. Next.

8 Commenters all agreed that the 2022 summer stack
9 analysis is conservative in assumptions and there is
10 agreement with these comments. When we say conservative we
11 believe our extreme weather assumptions are trending
12 towards pessimistic in terms of peak demand, supply, forced
13 outages, and available imports.

14 Commenters noted the 1,500-megawatt projected
15 hydro capacity derate is another conservative or
16 pessimistic estimate included in the 2022 stack analysis.
17 Again, staff agrees this is conservative but also a robust
18 assumption for an extreme weather scenario.

19 The hydro capacity derate is corroborated by
20 review of the California ISO recently released preliminary
21 2022 Net Qualifying Capacity List. The preliminary hydro
22 capacity totals for summer of 2022 are in fact about 800 to
23 1,000 megawatts lower than those for summer of 2021. But
24 recall the hydro capacity NQC values are based on an
25 average of historic years, not an actual drought year. The

1 stack analysis tool is considering extreme weather
2 conditions persisting, while the NQC hydro capacity is an
3 average hydro capacity snapshot. The stack analysis tool
4 derate for hydro capacity considers a persisting drought.

5 Commenters noted the 7.5 percent forced outage
6 rate assumption is high; however, this assumption remains
7 unchanged in the 22.5 percent PRM demand curve calculation.
8 Extreme weather events not only impact demand projections
9 but also supply site forced outages. Climate change in the
10 form of extreme weather, fire and smoke can also adversely
11 affect the supply fleet.

12 And lastly, commenters requested access to the
13 stack analysis tool and all underlying details used in the
14 tool. The stack analysis tool in its current form is
15 intended only for internal use. The tool is spreadsheet-
16 based with about 30 interdependent tabs. Over the next few
17 months, time will be dedicated to making the tool,
18 including workpapers, publicly available. Until that time
19 when we can share the tool publicly, we are providing any
20 specific data upon request. Next slide.

21 Our colleagues at the CPUC provided procurement
22 updates that are now incorporated into the revised summer
23 of 2022 stack analysis tool. The CPUC summer project watch
24 list identified increases to capacity. This is expected
25 online by summer of 2022. Please note this is in addition

1 to the CPUC procurement that already came online this
2 summer.

3 One commenter also noted the Redondo Beach
4 retirement date is up for reconsideration at next month's
5 State Water Resources Control Board Meeting. If the
6 Redondo Beach retirement date is extended this is simply a
7 one-for-one decrease in all of the stack analysis shortfall
8 metrics that will be shown on the following slides. It
9 should be noted these additional megawatts would eliminate
10 the amount and in some months lessen the duration of
11 trigger contingencies.

12 Missing from the draft 2022 stack analysis tool
13 were demand response and firm liquidated damage contracts
14 for the publicly owned utilities in the California ISO
15 footprint. The revised stack analysis now includes 4 to
16 500 megawatts for these previously unaccounted-for
17 resources. Next slide.

18 As in the draft presentation I will first break
19 down the July stack analysis figures that many of you have
20 seen before. Next.

21 The left axis shown in terms of megawatts will
22 display hourly supply bars and demand curve lines for a 15
23 percent and 22.5 percent planning reserve margin. Under
24 these demand curve lines we will show the stack bars of
25 available resources. Next.

1 The first bar in the stack is the existing
2 generation supply. And this is adjusted by projected
3 derates for the drought to persist through 2022. Next.
4 Followed by the existing Demand Response bar.
5 Next.
6 Followed by the grey bar that identifies the CPUC
7 new resources and expedited procurement. Next.
8 The darkest blue bar displaying the solar supply.
9 Next.
10 And lastly, the green bar showing the projected
11 imports. Next.
12 The reddish lower line is a 15 percent average
13 demand curve. Next.
14 Followed by the 22.5 percent extreme weather
15 demand curve. Next.
16 And lastly, boxes showing the amount of trigger
17 contingencies.
18 Assuming a 15 percent average weather demand
19 curve for July 2022 the analysis does not identify a need
20 for trigger contingencies. And this is unchanged from the
21 draft results. However, with the changes outlined in the
22 previous slide trigger contingencies for the 22.5 percent
23 extreme weather demand curve were reduced by about 885
24 megawatts and also eliminated the need for contingencies
25 projected in the 6-7 p.m. hour from our draft analysis.

1 Next.

2 For August 2022 the stack analysis tool projects
3 similar results as seen in the figure for July, no trigger
4 contingencies projected for the 15 percent unreserved
5 margins. And this is unchanged in the draft analysis.
6 Considering the 22.5 percent extreme weather demand curve,
7 the revised analysis projects a reduction in the duration
8 of trigger contingencies when compared to the draft
9 results.

10 The updates eliminated any potential need for
11 contingencies in the 6-7 p.m. hour under the 22.5 percent
12 TRM demand curve. Overall, the updates reduced trigger
13 contingencies by about 1,000 megawatts when compared to the
14 draft results. Next.

15 For September of 2022 the revised stack analysis
16 continues to identify trigger contingencies under both
17 average and extreme weather demand curves. However, the
18 updates did eliminate contingencies during the 8-9 p.m.
19 hour, or the 15 percent from the reserve margins. So
20 again, for September of 2022 the stack analysis tool
21 projects trigger contingencies under both average and
22 extreme weather demand curves, but lower than the draft
23 analysis results. In hours when trigger contingencies
24 persist they are reduced to about 924 megawatts when
25 compared to the draft analysis. So under the 22.5 percent

1 extreme weather demand curve the analysis projects about
2 4350 megawatts of trigger contingencies maybe needed in the
3 7-8 p.m. hour. But this is reduced from the approximate
4 5,200 megawatts that were identified in the draft analysis.
5 Next slide.

6 Both this presentation and a revised staff paper
7 can be found at the CEC website under this docket or by
8 scanning the QR code. At this time staff recommends
9 adoption of Resolution 21-0908-8 adopting the 2022 Stack
10 Analysis. This concludes my presentation. I thank you for
11 your time. And now I'm joined by my colleague Lana Wong if
12 there are any questions.

13 CHAIR HOCHSCHILD: Thank you for that
14 presentation.

15 Let's go first to public comment.

16 MS. GALLARDO: This is Noemi the Public Advisor.
17 A reminder to attendees if you'd like to make a public
18 comment please use the raise-hand icon on the screen. If
19 you're on by phone press *9 to indicate if you'd like to
20 make a public comment. All right, I see a hand raised.
21 This is phone number ending in 385. A reminder, please
22 state your name, spell it and indicate your affiliation if
23 any. Your line is open and you may begin. And a reminder
24 to unmute on your end. Go ahead.

25 MR. UHLER: Can you hear me?

1 MS. GALLARDO: Yes, we can.

2 MR. UHLER: Okay, this is Steve Uhler calling. I
3 have some points to make on the stack analysis. I
4 conversed with Angela Tanghetti about whether or not the
5 system uses things like minimum load or power factor in
6 consideration of available supply.

7 And also this is part of the seed of my objection
8 to the petitions for name changes and ownership changes is
9 finding -- and now that Michael Nyberg has admitted that
10 the QFER system cannot take into account the relationship
11 between agencies of power plants, how are you sure you have
12 everything and have taken everything into account? And he
13 admitted referencing my main gripe, which is connection to
14 the EIA database, which handily provides us with GIS
15 information as well as minimum load and power factor.

16 And I'm trying to understand why there's any need
17 for a simplistic system to look at this. I would think
18 that your resource planner or material resource planner,
19 commonly referred to as MRP, would supplant this entire
20 operation. So hopefully you're getting my point. The
21 Commission doesn't seem to know all the power plants. Even
22 Ms. Tanghetti noted that they discovered other power plants
23 that could help out, which is not unlike a number of years
24 ago when I presented her with some power plants for net
25 short.

1 So I really want you to pay attention, and pay
2 attention to Michael Nyberg who admits his database system
3 cannot connect all this stuff together. Somebody needs to
4 connect it all together. I put together a site I called
5 Gencard. Angela could give you a link to it, Nyberg could
6 give you the link to it, to show you how all of this then
7 can be connected together. And you can actually look at
8 it, and when somebody puts a bar on the chart you can
9 actually go visit the power plant courtesy of Google map
10 and see who's nearby within about a 10-mile square.

11 These are all important things, because circuits,
12 as you know in your house if you plug too many things into
13 one circuit you pop a breaker. You need to break down to
14 the level of circuits. This is all doable. It's all
15 doable right now. It's all doable with software that's
16 been around since the 40s that helped us win the war, build
17 more ships faster than it could be sunk.

18 We need to start doing that, so I want you to
19 consider the value of this as being nil until you have
20 things like power factor and minimum load. That's the end
21 of my comment. Thank you.

22 CHAIR HOCHSCHILD: Any other public comment on
23 Item 8?

24 MS. GALLARDO: This is Noemi, the Public Advisor.
25 I do not see any other hands raised for this item.

1 CHAIR HOCHSCHILD: Okay, let's turn to
2 Commissioner discussion, starting with Commissioner Gunda.

3 COMMISSIONER GUNDA: Yes, thank you, Chair. I'm
4 just going to begin by just thanking Angela and Lana and
5 all the reliability analysis team for doing such an
6 incredible amount of work over the last six to eight months
7 to really try to kind of help us have some situational
8 awareness on how to plan for contingencies.

9 So I do want to just kind of remind everybody, I
10 mean I know all the Commissioners are very much aware of
11 this, but it'll probably benefit some of the public that
12 might not follow this in detail. So last year after the
13 rolling outages that we had the joint agencies, so CAISO,
14 CPUC and CEC collectively put out a root cause analysis.
15 And a part of the recommendations from that report was for
16 the CEC to develop and publish a multiyear statewide summer
17 assessment to provide information to support reliability
18 planning and maintain situational awareness on potential
19 impacts of grid reliability under extreme conditions.

20 So that is really the inception of this work. So
21 this work is trying to respond to that call for better
22 situational awareness. And as number of the commentators,
23 I mean number of stakeholders who provided powerful input:
24 SCE, PG&E, and Midway, they kind of note the importance of
25 doing this analysis more holistically including using lots

1 of lower expectation analysis,

2 And as Mr. Uhler just mentioned I totally agree
3 that the need is to develop more and more sophisticated and
4 robust analysis to really bookend the issues around
5 reliability. But I just do want to also recognize that the
6 staff had to very quickly put something to begin to think
7 about this problem. So I think of the product in terms of
8 the hourly stack analysis as an improvement on other stack
9 analyses that do not look at the hourly profiles. And one
10 of the advantages of this is to at least, even as you
11 develop that extreme scenario in a (indiscernible) manner
12 are you still have the opportunity to say, "Here is a
13 bookend on how we want to think about it." So it is a
14 reliability check in the contingency timeframe. And I just
15 want to mention that and clarify that for the broader
16 attendees as well.

17 So we at CEC think of this, beginning to think of
18 this, and then socialize the language as three distinct
19 timeframes. You have the timeframe of the policy analysis,
20 which is the 2045 timeframe where you're talking about
21 developing resource plans as indicated. It provides some
22 directional policy lens to the to the state agencies and
23 the state and develop some ideas on what are some of the
24 long lead term resources we should be investing in.

25 And it's important to consider some of

1 reliability analysis data as well as an indication to work
2 out how do we include resources and transmission and such.

3 And the second timeframe is really where the
4 procurement happens, which is in the 10-year timeframe.
5 For example, the IRB process at CPUC does a very robust
6 analysis to think through what additional procurement
7 should be ordered to kind of meet the needs of the demand.
8 Again, the overall demand uncertainties are still there,
9 because you're talking about a decade. The climate crisis
10 uncertainty is still there. But you're trying to look at a
11 stochastic way of figuring out what are some of those
12 resources required and then order some procurement. And
13 then what we've seen from CPUC is the 11,500 gigawatts of
14 NQC value that was ordered for procurement earlier this
15 year.

16 So once you kind of do the procurement then comes
17 the third phase, which is the contingency planning phase.
18 We know we have the steel in the ground, and that we have.
19 And then we are going into a particular summer -- or in
20 this case a few months and prior to the summer -- there
21 isn't a lot that is going to come through a procurement
22 lens. But in that sense, in that case, you really want to
23 understand given what steel in the ground we already have
24 if something were to happen in terms of an extreme
25 situation, what potential shortfall could we be seeing.

1 Again, in terms of how do you construct that
2 extreme scenario there's a lot of different ways to do it.
3 What we try to do is really think about the length of the
4 PRM or the planning of zero margin, which breaks it down
5 into three components. Take the demand, add to it some
6 outages, and then add to that the NERC requirements. So
7 the 6 percent NERC requirements is something we never
8 change, but they have been a collective indication that we
9 should think about higher outages during extreme
10 conditions. And that's what Angela pointed out in terms of
11 the reasonableness behind the 7.5 percent kind of
12 assumption.

13 And then in terms of the demand, the deviation
14 from the one-in-two, we really look to 2020. In 2020 the
15 day-ahead forecast during the week of September -- it was
16 August 14th to the 19th we were talking about 13 to 14
17 percent about the one-in-two forecast. But because of the
18 actions that the Governor's Office shepherded in, and
19 collectively the state agencies had taken the overarching,
20 even the realized demand was about 9 percent off the one-
21 in-two forecast. So that's a reasonableness check on that.

22 So we're looking at constructing an extreme
23 scenario, because we want to construct an extreme scenario.
24 And then say under these extreme scenarios what could be a
25 shortfall between what procurement has already occurred and

1 what should we, how do we then cover that gap. And that's
2 really what this analysis is being used for.

3 As Angela pointed out earlier, a couple of weeks
4 ago the supply analysis team has also provided the
5 stochastic analysis portion of this. And that's something
6 we are going to continue to improve, both the hourly stack
7 analysis as well as the stochastic analysis. But I just
8 want to recognize for the stakeholders and everybody that
9 this is a first-order treatment of extreme conditions as
10 they emerge. And we need to continually improve them to
11 think through what contingencies we should plan for.

12 So I just wanted to share that for the broader
13 audience. I really want to thank the comments from SCE,
14 PG&E and Midway. And I also want to thank particularly FCE
15 in their collaboration on helping staff understand the loss
16 of the expectations analysis and then giving the time to
17 staff to develop that analysis as well, so I'm thankful to
18 them.

19 And I also want to -- and I've been just waiting
20 to the phone to Mr. Uhler. I really appreciate the
21 importance in providing data discrepancies. And I think
22 it's extremely important that we don't operate from faulty
23 or flawed data, so I really am appreciative of Mr. Uhler's
24 raising the flags on this.

25 Again, I do want to complement that with the

1 incredible work our staff do. And the dedication they have
2 in trying to make sure some of the data that we are using
3 is as good as possible and is reasonable as possible. But
4 having said that, I do want to recognize for Mr. Uhler
5 that there is an interagency effort to make sure the data
6 that we have using in stack analysis as well as the loss of
7 load expectation analysis is going to be as good and as
8 consistent as possible. That's some work that behind the
9 scenes that staff are doing.

10 Thank you for flagging this and we will continue
11 to improve our analysis and work, try to inform the
12 reliability for State of California and all Californians.
13 With that I would be extremely -- I would definitely
14 support this, but I'll pass it back to you, Chair.

15 CHAIR HOCHSCHILD: Yes, thank you, Commissioner
16 Gunda.

17 Any other comments from Commissioners at this
18 point, Commissioner McAllister?

19 COMMISSIONER MCALLISTER: Yeah just very briefly
20 I just want to commend staff and Angela in particular, but
21 the whole staff and the Assessments Division who worked on
22 this. These products, our ability to really pivot and
23 develop products and improve them constantly, just it
24 always never ceases to amaze me just the depth of knowledge
25 and skill across staff on this. And Angela you're just a

1 great resource for the Commission and also a great
2 spokesperson for these products that really are -- this is
3 an example of a product that is responding to an urgent,
4 real-time real-world need. And just your ability to kind
5 of get on top of it and do consistent improvement and
6 across the agencies collaborate on this to make sure it's a
7 great product is just tremendous, so thank you for that.

8 And then finally thanks to Commissioner Gunda for
9 your leadership. I mean without you're sort of roll up
10 your sleeves and helping staff get to get the resources and
11 just get the vision to do this work. And again, it's just
12 all the better for your leadership in the Division, so
13 thank you.

14 CHAIR HOCHSCHILD: Well, well said, Commissioner
15 McAllister.

16 And thank you Angela on behalf of all of us as
17 well and Commissioner Gunda for getting us here. With that
18 Commissioner Gunda, are you willing to move this item?

19 COMMISSIONER GUNDA: Yeah, Chair, I would move
20 this item.

21 CHAIR HOCHSCHILD: All right, Commissioner Gunda
22 has moved Item 8. Commissioner McAllister, would you be
23 willing to second?

24 COMMISSIONER MCALLISTER: Second Item 8.

25 CHAIR HOCHSCHILD: All in favor say aye,

1 Commissioner Gunda?

2 COMMISSIONER GUNDA: Aye.

3 CHAIR HOCHSCHILD: Commissioner McAllister?

4 COMMISSIONER MCALLISTER: Aye.

5 CHAIR HOCHSCHILD: Commissioner Monahan?

6 COMMISSIONER MONAHAN: Aye.

7 CHAIR HOCHSCHILD: Commissioner Douglas?

8 COMMISSIONER DOUGLAS: Aye.

9 CHAIR HOCHSCHILD: And I vote aye as well. Item
10 8 passes unanimously.

11 We're just about at noon, so I think what let's
12 do is break at this point and then reconvene at 1:00. Then
13 we'll finish up the rest of the agenda if that's okay with
14 everyone. Okay, see everybody at 1:00.

15 (Off the record at 11:56 a.m.)

16 (On the record at 1:03 p.m.)

17 CHAIR HOCHSCHILD: Thank you, everyone. Welcome
18 back. We are now going to move on to Item 9, Association
19 for Energy Affordability.

20 MS. JONES: Good afternoon, Chair and the
21 Commissioners. My name is Myoung-Ae Jones. I am an Energy
22 Specialist for the Building Initiative for Low-Emissions
23 Development Program, which is commonly called by its
24 acronym BUILD, in the Renewable Energy Division. Today,
25 staff is recommending approval of an agreement with the

1 Association for Energy Affordability to provide technical
2 assistance under the program.

3 BUILD is a new building decarbonization pilot
4 program established by Senate Bill 1477 to incentivize the
5 deployment of the near-zero emission technologies. This
6 program is overseen by the CPUC, and the CEC is the
7 administrator. Next slide, please.

8 The primary goal of BUILD is reducing greenhouse
9 gas emissions in new residential building sector by
10 incentivizing low-emissions technologies deployment in new
11 construction. BUILD is specifically targeted to new low-
12 income residential housing developments, with a focus on
13 serving low-income and disadvantaged communities.

14 The program will incent all-electric energy-
15 efficient housing that reduces greenhouse gas emissions,
16 and has additional benefits of improved indoor air quality
17 and access to clean energy for occupants. And it will
18 support additional low-income housing development in a
19 housing-scarce California. Next slide, please.

20 The initial budget for this agreement is \$6
21 million for six years with the option to augment the budget
22 up to \$2 million. The purpose of this agreement is to
23 absorb for developers the often-expensive soft cost of an
24 all-electric building design and energy modeling. Many
25 affordable housing developers are non-profit entities

1 operating with a tight budget. And providing free
2 consulting services at the pivotal early stage will
3 encourage program participation and also will maximize the
4 decarbonization potential of each project we assist.

5 Another main purpose of this agreement is to
6 provide knowledge transfer. Imparting technical knowledge
7 and field-level know-how of clean building design and
8 construction by reputable experts will accelerate the pace
9 of adoption of new building practices, away from mixed-fuel
10 usage and toward all-electric.

11 Finally, work from this agreement will advance
12 equity by increasing access to clean energy with a focus on
13 low-income housing projects and extensive outreach efforts
14 to disadvantaged and harder-to-reach communities, including
15 tribal areas. Next slide, please.

16 The tasks of this agreement will be performed by
17 a highly-competent contractor team comprised of experts in
18 building decarbonization, energy auditing and design,
19 engineering, construction management, and education and
20 outreach.

21 The prime contractor has nearly three decades of
22 experience in providing comprehensive and consulting
23 services to the multifamily building community. Their
24 strengths are reinforced by nine subcontractors with well-
25 established track records in specific technical areas under

1 this multidisciplinary agreement.

2 I'd like to quickly highlight how this agreement
3 will also help the state advance equity and supplier
4 diversity through the subcontractors.

5 California Housing Partnership is a nonprofit
6 whose mission is to provide housing that is sustainable and
7 affordable for working families, homeless, veterans,
8 seniors and the disabled.

9 Highlands Diversified is certified as both a
10 disabled veteran-owned and a minority-owned business. Next
11 slide please.

12 Staff would like to thank staff from the Chief
13 Counsel's Office and the Contracts, Grants, and Loans
14 Office that provided guidance in the development of this
15 agreement.

16 Staff is recommending that the CEC approve the
17 agreement with Association for Energy Affordability to
18 provide technical assistance services under the BUILD
19 Program. Staff is also recommending the CEC adopt the
20 determination that approval of this agreement is exempt
21 from CEQA.

22 This concludes staff's presentation, and I am
23 available to answer any questions you may have. We also
24 have our Office Manager Deana Carrillo on the phone. Thank
25 you.

1 CHAIR HOCHSCHILD: Thank you.

2 Let's turn to public comment on Item 9.

3 MS. GALLARDO: This is Noemi the Public Advisor.

4 A reminder to attendees who would like to make a public

5 comment, please use the raise-hand feature on the screen.

6 If you're on by phone please press *9 to indicate you would

7 like to make a comment.

8 All right Chair, I do not see any hands raised

9 for Item Number 9. We may proceed.

10 CHAIR HOCHSCHILD: Okay, thank you. Let's turn

11 to Commissioner McAllister to start.

12 COMMISSIONER MCALLISTER: Great. Well thank you

13 Chair. And thank you, Myoung, for that presentation,

14 really great stuff. I'm very excited to have BUILD nearing

15 roll out and it's an extremely important program aimed at

16 helping our low-income multifamily buildings be all they

17 can be, be decarbonized and be largely electric. And so

18 it's, I think, path breaking in that regard. And we're

19 appreciative to be working closely with the Public

20 Utilities Commission on this program. And the technical

21 assistance will be key for this market transformation,

22 that's why I'm really excited about this contract.

23 And I want to just acknowledge and thank Deana

24 Carrillo and also Natalie Lee from the Renewables Division

25 as well as Allan Ward and Matthew Pinkerton from Contracts,

93

1 Grants and Loans and also Mike Poe and Phil Dyer. All of
2 you pitched in a lot and it's just incredibly valuable and
3 appreciated. And the across the Efficiency Division lots
4 of work in collaboration, and also with our colleagues at
5 the Public Utilities Commission.

6 So this is, I think, a really necessary and
7 highly valuable component of the program rollout and will
8 help the marketplace participate and help this program
9 really have the impact that we hope it will have and expect
10 it will have. So we're very happy to support this item and
11 welcome any other comments.

12 CHAIR HOCHSCHILD: Okay, thank you.

13 Colleagues, anyone else wishing to chime in on
14 this topic? Okay.

15 Let me just add my thanks to that of Commissioner
16 McAllister's. This hits many, many of our core goals,
17 certainly around an equity-first approach in lifting up
18 climate solutions and electrification, the innovation
19 there. And I think it's a great next step after our code
20 was adopted a few weeks ago, so very pleased on the
21 progress here. Thank you to the whole team.

22 Commissioner McAllister, would you be willing to
23 move Item 9?

24 COMMISSIONER MCALLISTER: I move Item 9,
25 absolutely.

1 CHAIR HOCHSCHILD: Commissioner Douglas, would
2 you be willing to second?

3 COMMISSIONER DOUGLAS: Second.

4 CHAIR HOCHSCHILD: All right, all in favor say
5 aye, Commissioner McAllister?

6 COMMISSIONER MCALLISTER: Aye.

7 CHAIR HOCHSCHILD: Commissioner Douglas?

8 COMMISSIONER DOUGLAS: Aye.

9 CHAIR HOCHSCHILD: Commissioner Gunda?

10 COMMISSIONER GUNDA: Aye.

11 CHAIR HOCHSCHILD: Commissioner Monahan?

12 COMMISSIONER MONAHAN: Aye.

13 CHAIR HOCHSCHILD: And I vote aye as well. Item
14 9 passes unanimously. Let's turn now to Item 10,
15 California Department of Food And Agriculture.

16 MS. PUREWAL: Good afternoon, Chair and
17 Commissioners. My name is Sharon Purewal and I am a staff
18 member in the Fuels and Transportation Division's Advanced
19 Vehicle Infrastructure Office. Today staff is seeking
20 approval of an interagency agreement with the California
21 Department of Food and Agriculture to procure test
22 standards to evaluate and verify commercial measuring
23 devices that dispense hydrogen and electricity as zero-
24 emission transportation fuels. Next slide, please.

25 The benefits to California are to standardize

1 zero-emission vehicle fueling infrastructure, which will
2 minimize measurement error in commercial transactions and
3 provide consumers a basis-of-value comparison to ensure
4 that operating requirements are consistently applied in the
5 exchange of goods and services.

6 Additionally, this action will support counties
7 that lack necessary test standards to test and verify
8 commercial zero-emission vehicle devices in their
9 jurisdictions. To date, only three counties have purchased
10 their own electric vehicle supply equipment test standards.
11 And most of the hydrogen fueling stations in California
12 rely on the California Department of Food and Agriculture
13 to conduct testing; 10 of the 48 retail hydrogen stations
14 are overdue for testing.

15 Adherence to measurement standards will provide
16 both buyer and seller assurance of equity and confidence
17 for fuel that is dispensed. Next slide, please.

18 In order to provide these benefits the California
19 Department of Food and Agriculture will procure up to five
20 electric vehicle supplied equipment, certified field
21 standards, and to test and verify the energy measurement of
22 commercial electric vehicle supply equipment, and one
23 hydrogen fuel standard to test and verify commercial
24 hydrogen fueling systems. Next slide, please.

25 Staff recommends approval of the proposed

1 interagency agreement with the California Department of
2 Food and Agriculture, for just over \$400,000 to provide the
3 necessary field test standards to evaluate and verify
4 commercial measuring devices that dispense hydrogen and
5 electricity as a zero-emission transportation fuel. Staff
6 also recommends adoption of the determination that this
7 project is exempt from CEQA.

8 And with that, I would like to thank you for your
9 time and consideration of this item. I am available for
10 any questions you may have. And Kevin Schnepf from the
11 California Department of Food and Agriculture is also
12 available to provide supporting comments and answer any
13 questions. Thank you.

14 CHAIR HOCHSCHILD: Okay. Thank you so much.
15 Let's see if we have public comment on Item 10.

16 MS. GALLARDO: This is Noemi, the Public Advisor.
17 So let me start with Kevin, would you like to make a public
18 comment?

19 MR. SCHNEPP: Yes, Noemi, thank you. Hopefully
20 you can hear me okay?

21 MS. GALLARDO: Yes, we hear you perfectly clear.

22 MR. SCHNEPP: Great. Thank you Chair and
23 Commissioners. My name is Kevin Schnepf and I'm the
24 Environmental Program Manager for the California Department
25 of Food Ag Division of Measurement Standards. That's Kevin

1 Schnepp, S-c-h-n-e-p-p.

2 The California Department of Food and Ag Division
3 Measurement Standards has been actively engaged in the
4 development, testing and buildout of zero emission vehicle
5 infrastructure throughout the state. We've been in this
6 space about a little over 10 years now, with development of
7 a testing lab for hydrogen fuels that's been activated in
8 this space since about 13 or 14 years.

9 The initial program we started off with was
10 designed to facilitate about 15 to 20 hydrogen fueling
11 stations. We now have 50 open and operating in the state.
12 Beginning January of 2021 specifications and tolerance and
13 requirements for electric vehicle charging systems was
14 adopted and the regulation, which makes those devices
15 subject to testing and inspection to make sure they conform
16 to all applicable tolerances.

17 That testing program now is already at a backlog.
18 And the growth in ZEV infrastructure, particularly for
19 electric vehicle charging equipment is accelerating at a
20 rapid pace. Which is, I mean, in great part to the efforts
21 of the Energy Commission, the Air Resources Boards and the
22 Directors of the Governor's Office as well as support from
23 the Legislature.

24 So with these goals in mind we request that you
25 both consider and approve this request for additional

1 equipment. While this market is growing rapidly, it is
2 still not yet ready for a fee-based assessment on the users
3 and operations equipment to support the program needs. And
4 I think this would be an important measure to help us
5 facilitate that transition so that in the future when it
6 becomes a full market, the market would be basically an
7 independently viable marketplace without the need of state
8 assistance. We'll be ready to transition to a fee-based
9 structure.

10 But at this time with the growth and the rapid
11 expansion of electric vehicle charging stations as well as
12 hydrogen fueling stations this equipment is desperately
13 needed to support our efforts and the efforts of the county
14 Ag Commissioners and sellers who are responsible for
15 testing and inspection-installed devices within their
16 jurisdiction.

17 Thank you for your attention. And I can address
18 any questions, please, if you have any.

19 CHAIR HOCHSCHILD: Thank you.

20 Any additional public comment on Item 10?

21 MS. GALLARDO: This is Noemi, the Public Advisor.
22 Audience, if you would like to make a public comment,
23 please use the raise-hand icon on the screen, if you are on
24 by phone press *9.

25 Chair, I do not see any hands raised, we may

1 proceed.

2 CHAIR HOCHSCHILD: Okay, thank you, Kevin, for
3 those remarks. Let's turn now to Commissioner discussion
4 started with Commissioner Monahan.

5 COMMISSIONER MONAHAN: Well, I think this this
6 grant aligns really well with the leadership role that we
7 have on building out ZEV infrastructure, but a recognition
8 that we really need our partners like Kevin and the
9 Department of Food and Agriculture to be able to make sure
10 that this equipment is functioning well.

11 As Kevin said the market isn't ready yet for a
12 fee approach. That's ultimately we need to get to a place
13 where the market is self-sustaining. We don't need grants
14 to build out this ZEV infrastructure. We don't need
15 funding to support this if there's more of a business model
16 case for this. But in these early days we need our
17 partnership with the California Department of Food and
18 Agriculture.

19 So I just want to thank Kevin, Sharon, Jennifer
20 Allen who supervises the group, Mark Wenzel, just that we
21 need these kinds of collaborations in our agency. And we
22 want to be able to use our grant money to support this
23 nascent market.

24 CHAIR HOCHSCHILD: Terrific.

25 Other Commissioners wishing to make a comment?

1 If not I'll -- oh yeah, go ahead Commissioner Gunda.

2 COMMISSIONER GUNDA: Yeah and thank you, Chair.

3 I think I just wanted to at reiterate what Commissioner
4 Monahan had just mentioned, I think we're seeing this over
5 and over in the transportation sector of kind of a deep
6 partnership between CEC, CARB, CPUC. We had a wonderful
7 project with DMV and now this collaboration. I'm just
8 really grateful that all the agencies are working together.
9 And thanks to Commissioner Monahan's leadership and the
10 staff for making this recommendation. Thank you.

11 CHAIR HOCHSCHILD: Thank you, Commissioner.
12 Unless there are other Commissioners wishing to make a
13 comment I'd entertain a motion on Item 10 from Commissioner
14 Monahan.

15 COMMISSIONER MONAHAN: I move Item 10.

16 CHAIR HOCHSCHILD: Okay, Commissioner Gunda,
17 would you be willing to second?

18 COMMISSIONER GUNDA: Second Item 10.

19 CHAIR HOCHSCHILD: Okay. All in favor say aye,
20 Commissioner Monahan?

21 COMMISSIONER MONAHAN: Aye.

22 CHAIR HOCHSCHILD: Commissioner Gunda?

23 COMMISSIONER GUNDA: Aye.

24 CHAIR HOCHSCHILD: Commissioner McAllister?

25 COMMISSIONER MCALLISTER: Aye.

1 CHAIR HOCHSCHILD: Commissioner Douglas?

2 COMMISSIONER DOUGLAS: Aye.

3 CHAIR HOCHSCHILD: And I vote aye as well. Thank
4 you all, Item 10 passes unanimously.

5 Let's turn now to Item 11, Blueprints for Medium
6 and Heavy-Duty Zero-Emission Vehicle Infrastructure.

7 MS. REID: Good morning, Chair and Commissioners.
8 My name is Kate Reid, Air Resources Engineer with the Fuels
9 and Transportation Division's Freight and Transit Unit.
10 We're seeking approval today for four agreements resulting
11 from the "Blueprints for Medium and Heavy-Duty Zero-
12 Emission Vehicle Infrastructure Solicitation". This
13 solicitation was released in July of 2020. \$3 million was
14 available to fund planning blueprints to identify actions
15 and milestones needed for implementation of medium- and
16 heavy-duty zero-emission vehicles and the related electric
17 charging and/or hydrogen refueling infrastructure.

18 A minimum of \$1 million of total funds was set-
19 aside for public entities. Subsequently, the Energy
20 Commission increased the total funding to approximately
21 \$5.6 million, which allowed all public entities with a
22 passing score to be funded. Under this solicitation, 40
23 projects were proposed for award. Twenty of those projects
24 were presented and awarded at the last two business
25 meetings. Today I will be presenting four more of those

1 projects. The remaining projects will be presented at
2 later business meetings. Next slide, please.

3 The proposed projects will create roadmaps for
4 large-scale infrastructure projects, plan for resiliency,
5 and provide best practices and key lessons learned for
6 future replicability at other private and public agencies.
7 These blueprints will also help other agencies and fleets
8 understand which technology may work best for their
9 applications, routes, and driving environments, which will
10 ultimately accelerate meeting California's goal of
11 transitioning medium- and heavy-duty trucks and buses to
12 zero-emission by 2045.

13 Finally, the majority of these projects once
14 implemented will benefit low-income communities,
15 disadvantaged communities, and/or tribal lands. Next
16 slide, please.

17 Forty agreements have been selected for approval
18 and award. The breakdown of vehicle sector is shown on
19 this slide. The majority of projects will address fleets,
20 goods movement, and transit. The remainder will seek to
21 address smaller sectors such as school buses, port
22 equipment, and other categories shown here which is
23 comprised of airport ground support, ferries, and refuse
24 collection. Next slide, please.

25 The first proposed agreement is with the

1 Sacramento Municipal Utility District or SMUD. This
2 project is to develop a blueprint for medium- and heavy-
3 duty electric charging and hydrogen refueling
4 infrastructure for fleets and pass-through traffic moving
5 through the SMUD service territory. Next slide, please.

6 The next proposed agreement is with the City of
7 Culver City. This project is to develop a blueprint for
8 installing depot charging infrastructure to support the
9 city's transition to full medium- and heavy-duty transit
10 fleet electrification. Next slide, please.

11 The next proposed agreement is with CALSTART.
12 For this project CALSTART and the City of Porterville will
13 develop a blueprint for installation of electrical charging
14 infrastructure for medium- and heavy-duty electric vehicles
15 in and around Porterville, California. The project will
16 develop strategies to allow private fleet use of public
17 charging infrastructure, providing economic value to local
18 private fleet operators and municipal departments. Next
19 slide, please.

20 The final proposed agreement is with The Redwood
21 Coast Energy Authority. This project is to develop a
22 blueprint for installing electric charging and hydrogen
23 refueling infrastructure for medium- and heavy-duty zero-
24 emission vehicles in Humboldt County and surrounding areas.
25 Next slide, please.

1 Staff recommends approval of these four grant
2 awards and adoption of staff's determination that the
3 projects are exempt from CEQA. And that concludes my
4 presentation. Thank you all for your time and
5 consideration of these items.

6 CHAIR HOCHSCHILD: Thank you, Kate.

7 Let's move now to public comment on Item 11.

8 MS. GALLARDO: This is Noemi, the Public Advisor,
9 a reminder to our attendees, if you would like to make a
10 public comment please use the raise-hand icon on the
11 screen. If you're on by phone press *9 to indicate you
12 would like to make a public comment.

13 Chair I do not see any hands, we may proceed.

14 CHAIR HOCHSCHILD: Okay let's go to Commissioner
15 discussion. Commissioner Monahan.

16 COMMISSIONER MONAHAN: Well, this is you guys are
17 old hats on this. This is our third business meeting with
18 these blueprints, but I'll just be very brief. I love
19 these blueprints and the medium and heavy-duty space. I
20 think you'll see they really emphasize how a lot of these
21 planning efforts involved both battery-electric and fuel-
22 cell electric vehicle infrastructure. And I think that's
23 particularly important in the medium- and heavy-duty space
24 where the solution side just maybe isn't as clear or robust
25 yet. And so there's a role for both zero-emission vehicle

1 technologies and we're seeing this play out time and again
2 in the blueprints that are being developed.

3 So while we don't have very many fuel cell
4 medium- and heavy-duty vehicles right now my hope is that
5 these planning efforts, together with what we're seeing
6 globally, will lead to deeper investments on the vehicle
7 side.

8 I want to thank Kate, Michelle Vater and
9 Elizabeth John for shepherding these, get used to more of
10 them coming down at the business meeting, so I think I'll
11 just stop there.

12 CHAIR HOCHSCHILD: Could I ask a question? This
13 may be for you or it may be for staff, but I'm just curious
14 as these blueprints are being developed do they have an
15 opportunity to exchange between each other? And is it
16 valuable for them, for Sacramento to see what Culver City
17 is doing and what Redwood -- I mean, how does that work?

18 MS. REID: I suppose that they could collaborate
19 with each other based on just knowing who each other are
20 from the NOPA, but there is no specific plan in place for
21 them to collaborate with each other.

22 CHAIR HOCHSCHILD: Yeah, and it may not be that
23 useful if there are very different circumstances. I'm
24 just wondering if there's any value to that and whether
25 that happens.

1 COMMISSIONER MONAHAN: I think, Chair, you raise
2 an important point, which is probably worth deliberating on
3 more. And I won't deliberate here, but just a question out
4 there is just what more can we do to support learning
5 across the communities as we deploy ZEV infrastructure as
6 we have these planning blueprints. And there's just so
7 much learning that's happening right now at this early
8 stage. And just like we have this EPIC symposium, should
9 we think about having some kind of ZEV symposium in
10 collaboration with CARB and GO-Biz, because it feels like
11 there's room for that and something we should consider in a
12 cross-agency way.

13 CHAIR HOCHSCHILD: Yeah, and then maybe at a
14 minimum just organizing a Zoom with all the entities that
15 are doing these blueprints together and giving them their
16 contact info. And I don't know whether some might work
17 together but just for some exchange, particularly ones that
18 are kind of ahead of the curve and have done more, each one
19 teach one model is a good one.

20 So great, any other questions or comments on Item
21 11 from my colleagues? Okay hearing none, Commissioner
22 Monahan, would you be willing to move Item 11?

23 COMMISSIONER MONAHAN: I move Item 11.

24 CHAIR HOCHSCHILD: Commissioner Douglas, would
25 you be willing to second?

1 COMMISSIONER DOUGLAS: Yes, second.

2 CHAIR HOCHSCHILD: All right, all in favor say
3 aye, Commissioner Monahan?

4 COMMISSIONER MONAHAN: Aye.

5 CHAIR HOCHSCHILD: Commissioner Douglas?

6 COMMISSIONER DOUGLAS: Aye.

7 CHAIR HOCHSCHILD: Commissioner McAllister?

8 COMMISSIONER MCALLISTER: Aye.

9 CHAIR HOCHSCHILD: Commissioner Gunda?

10 COMMISSIONER GUNDA: Aye.

11 CHAIR HOCHSCHILD: And I vote aye as well. That
12 item passes unanimously.

13 We'll turn now to Item 12, WattEV Inc.

14 MR. KOZUCH: Good afternoon, Chair and
15 Commissioners. My name is Matthew Kozuch, an Air Pollution
16 Specialist with the Fuels and Transportation Division's
17 Freight & Transit Unit. We are seeking approval today for
18 a \$1 million agreement with WattEV, Inc. to install,
19 commission, and operate a public charging facility in
20 Bakersfield, California that will serve medium- and heavy-
21 duty battery electric trucks and to adopt staff's
22 determination that this action is exempt from CEQA. Next
23 slide, please.

24 The agreement will enable accessible public
25 charging options for battery-electric trucks along a major

1 highway corridor in Kern County. Reliable public charging
2 stations are crucial to allowing medium- and heavy-duty
3 fleets, especially smaller independent owner-operators who
4 may be unable to finance their own infrastructure to
5 transition to electric vehicles in the future.
6 Furthermore, this truck stop will promote wider adoption of
7 longer-range medium- and heavy-duty electric vehicle models
8 by providing options for opportunity charging.

9 This project will additionally provide targeted
10 emission reductions and health benefits to the Bakersfield
11 area, which has been historically plagued by poor air
12 quality, stemming largely from medium- and heavy-duty
13 diesel pollution. Next slide, please.

14 Through this agreement, WattEV will design and
15 develop a public charging facility for medium- and heavy-
16 duty battery electric vehicles with an estimated eight 250-
17 kilowatt chargers and four 350-kilowatt chargers. These
18 350-kilowatt chargers are capable of boosting the average
19 Class 8 electric truck from empty to full charge in about
20 an hour.

21 In addition, WattEV will operate the facility
22 throughout the project term and will demonstrate a
23 sustainable business model by the end of the project for
24 continued commercial operation and project expansion.

25 Lastly, WattEV will increase utilization of the

1 facility through deploying at least ten electric trucks by
2 2024 through offtake agreements, which aim to make use of
3 the facility, with an average annual energy consumption of
4 three megawatt hours per day. Next slide please.

5 This agreement has some potential to impact the
6 medium- and heavy-duty electric vehicle market in several
7 ways. With more than 100 public-access diesel truck stops
8 in California today, Watt EV's business model can be
9 transformative in increasing the number of statewide
10 medium- and heavy-duty public electric charging stops.

11 WattEV is already in the planning stages for
12 similar electric trucks off in San Bernardino and Gardena
13 that will aim to serve nearby ports and warehouse areas.
14 This agreement will additionally demonstrate several high-
15 capacity chargers. And will even consider cutting-edge
16 technology such as Megawatt Charging System equipment
17 pending market readiness.

18 By pushing the markets for both medium- and
19 heavy-duty public-charging options and the associated
20 infrastructure, fleet owners will be more inclined to
21 purchase battery-electric truck models in the future year.
22 With currently about one million medium and heavy-duty
23 diesel vehicles in California there will be a need for an
24 estimated 180,000 medium- and heavy-duty electric trucks by
25 2030. WattEV's own goal of deploying 12,000 heavy-duty

1 electric vehicles in California by 2030, along with their
2 strong focus on public charging infrastructure, will help
3 bring the state closer to this 2030 projection. Next slide
4 please.

5 In summary, we would like to recommend approval
6 of this \$1 million agreement with WattEV, Inc.

7 In addition, we would like to recommend adoption
8 of staff's determination that this action is exempt from
9 CEQA. We would like to thank you for your time and
10 consideration of these items. And I'm available for any
11 questions you may have. Thank you very much.

12 CHAIR HOCHSCHILD: Well thank you, Matt, for that
13 terrific presentation. I'm also very impressed by your bow
14 tie.

15 MR. KOZUCH: Thank you.

16 CHAIR HOCHSCHILD: I know you must be smart,
17 because those things are difficult to tie. I've never been
18 able to master that.

19 Let's turn now to public comment on Item 12. Do
20 we have any people wishing to make a public comment?

21 MS. GALLARDO: This is Noemi, the Public Advisor.
22 A reminder to attendees if you would like to make a comment
23 please use the raise-hand icon and if you are on by phone
24 press *9 to indicate you would like to make a comment.

25 Chair, I do not see any hands raised. We may

1 proceed.

2 CHAIR HOCHSCHILD: Okay, let's go to Commissioner
3 discussion starting with Commissioner Monahan.

4 COMMISSIONER MONAHAN: Well, I feel like the two
5 WattEV grants really have to be looked at together in
6 concert. But I'll just say a few words about the grant
7 that Matt is shepherding so ably.

8 This is really -- when I heard about this project
9 I've got to say I was immediately like well when are we
10 going to be able to visit it, because this is the dream
11 team. Which we'll talk about in a second, like solar, plus
12 storage, plus second-use battery for addition for storage,
13 plus charging for medium- and heavy-duty vehicles, which is
14 the big pollution problem in California.

15 And so it really is like this is the ideal
16 project when it comes to medium- and heavy-duty
17 electrification. So I'm excited to see whether they can
18 scale this model and use our initial seed funds to be able
19 to expand outward. They have, as Matt told me, big plans
20 for expansion. And so I just think this is the kind of
21 project that is perfect for funding from both EPIC and the
22 Fuels and Transportation Division.

23 I know the legal team had to do a lot of work to
24 make sure that we were really careful about this, since
25 we're giving two grants from two different projects to the

1 same grantee. And they've done their homework to make sure
2 that we have due diligence on that. So yeah I strongly
3 recommend passing, that we all approve this project.

4 CHAIR HOCHSCHILD: Thank you, Commissioner
5 Monahan.

6 Any other comments from Commissioners? Seeing
7 none, Commissioner Monahan, would you be willing to move
8 this item?

9 COMMISSIONER MONAHAN: I move Item 12.

10 CHAIR HOCHSCHILD: Thank you. And, Commissioner
11 Gunda, would you be willing to second?

12 COMMISSIONER GUNDA: Second.

13 CHAIR HOCHSCHILD: Okay, so all in favor say aye,
14 Commissioner Monahan?

15 COMMISSIONER MONAHAN: Aye.

16 CHAIR HOCHSCHILD: Commissioner Gunda?

17 COMMISSIONER GUNDA: Aye.

18 CHAIR HOCHSCHILD: Commissioner McAllister?

19 COMMISSIONER MCALLISTER: Aye.

20 CHAIR HOCHSCHILD: Commissioner Douglas?

21 COMMISSIONER DOUGLAS: Aye.

22 CHAIR HOCHSCHILD: And I vote aye as well.

23 Congrats Matt and team. And we'll turn now to Item 13,
24 another WatteEV proposal here.

25 MS. ERSOY: Good afternoon, Chair and

1 Commissioners, my name is Elise Ersoy. I am an Electric
2 Generation System Program Specialist in the Energy Research
3 and Development Division Renewable Integration Unit.

4 Today I'm presenting a recommended award from the
5 EPIC solicitation that is at the same site as the project
6 that Matt just presented on. So it is as Commissioner
7 Monahan said, a standalone project. Next slide, please.

8 The proposed award will bring multiple benefits
9 to Californians. The technologies developed through this
10 award and others already awarded under this solicitation
11 will facilitate charging of heavy-duty vehicles in ways
12 that reduce stress on the electric grid, increase use of
13 distributed energy resources, and reduce the cost of
14 charging for fleets transitioning to electric vehicles.

15 These technologies can also provide resiliency
16 benefits for sites and communities where they are deployed,
17 while maximizing emission reductions from the electric and
18 transportation sectors. Next slide.

19 The objective of this solicitation and of the
20 project recommended today is to develop integrated
21 distributed energy resource packages to help charge fleets
22 of medium- and heavy-duty electric vehicles.

23 Transportation electrification, as you're well aware, is a
24 key strategy for reaching the state's zero-emission
25 transportation goals including the targets established by

1 Governor Newsom's Executive Order N-79-20 of last year.

2 This project will focus on the costs case,
3 reducing the cost of charging while demonstrating and
4 collecting costs data. Next slide.

5 The, WattEV project recommended for award today
6 would be the first all-electric public access truck stop in
7 California. If approved WattEV will deploy a scalable DER
8 package comprised of 3.85 megawatts of solar PV, 4.5-
9 megawatt hours of second-life battery storage to support a
10 fleet of 10 Class 8. The project aims to provide reliable,
11 low-cost charging for their private fleet, as well as to
12 support broader public access to medium-duty and heavy-duty
13 electric vehicle charging for fleets on Highway 99, a major
14 trade corridor.

15 In terms of market potential, the California DOT
16 lists 109 truck stops in California on their website. If
17 we were to assume that the same amount of solar and
18 stationary lithium-ion battery storage were deployed to
19 each of these sites it would equal 419 megawatts of solar
20 PV, which is the size of a utility-scale solar plant and
21 490-megawatt hours of second life-battery stationary
22 storage. Next slide.

23 So in conclusion staff recommends approval of
24 this grant award and adoption of staff's determination that
25 the project is exempt from CEQA. I'm available for any

1 questions as our representatives from WatteEV. Thank you.

2 CHAIR HOCHSCHILD: Thank you.

3 Any public comment on Item 12?

4 MS. GALLARDO: This is Noemi, the Public Advisor.

5 I do see a hand raised. It looks like the name is Salim, a
6 reminder to please restate your name, spell it and indicate
7 your affiliation if any. Your line is open and you may
8 begin.

9 MR. YOUSSEFZADEH: Good afternoon guys, I'm Salim
10 Youssefzadeh, S-a-l-i-m. I am the CEO of WatteEV and I'm
11 very grateful to be here today, so thank you very much. On
12 behalf of WatteEV I would like to thank the CEC for
13 recommending awards for both BESTFIT and EPIC that Matt and
14 Elise just presented.

15 WatteEV's mission is to create a network of
16 advanced high-power public charging infrastructure to
17 support medium- and heavy-duty fleets. The advanced
18 charging infrastructure and integrated DER system combines
19 renewable solar generation with advanced storage systems to
20 optimize energy management, lower costs, and reduce
21 pressure on the grid. With support from the CEC WatteEV is
22 creating the nation's first all-electric truck stop to
23 reduce barriers to EV adoption in order to accelerate fleet
24 electrification.

25 The project site is located along key freight

1 corridors through California's Central Valley and is in
2 close proximity to expanding base of distribution
3 warehouses, promoting access to critical zero-emission
4 technology that supports California's air quality goals and
5 helps fleets comply with the evolving regulatory landscape.

6 WattEV's 21st century truck stop will provide
7 significant economic and environmental benefits in one of
8 California's most underserved, under-burdened communities,
9 reducing diesel emissions in the critical non-attainment
10 areas.

11 We envision this project will be the flagship
12 location for an expanded high-powered charging network to
13 support fast charging for all vehicle types. WattEV is
14 grateful for the Energy Commission, for the opportunity to
15 deploy innovative zero-emission technology. And we look
16 forward to building this partnership, thank you.

17 CHAIR HOCHSCHILD: Thank you.

18 Any additional comment on Item 13?

19 MS. GALLARDO: Let me check. This is Noemi, the
20 Public Advisor. If anyone would like to make a comment
21 please use the raise-hand feature, if you're on by phone
22 press *9.

23 Chair, I do not see any other hands raised for
24 this item.

25 CHAIR HOCHSCHILD: Okay, Commissioner Monahan.

1 COMMISSIONER MONAHAN: Well, I just want to thank
2 first Elise Ersoy, Liet Le and Angie Gould for shepherding
3 this project. I think I said a lot of nice things about it
4 before, but a few comments based on what Salim was saying
5 in terms of this being the first all-electric truck stop
6 site. I mean, I think that's -- and it's also in terms of
7 having this integration with solar and battery storage.
8 When we think about the traditional gas station model,
9 which seems so unimaginative compared to what we can do
10 when it comes to fueling electric vehicles.

11 And this project is just really a manifestation
12 of it. I'm sure that I am not the only Commissioner who
13 would like to visit it once it's fully operational.

14 CHAIR HOCHSCHILD: I imagine you'll want to do
15 more than visit. I remember Commissioner Monahan going on
16 a visit to, I guess it was Motiv, where they have these
17 electric delivery trucks. And you took off driving that
18 thing. I didn't know if we'd see you again.

19 COMMISSIONER MONAHAN: Well, then a girl can
20 dream.

21 CHAIR HOCHSCHILD: Exactly.

22 Well let me add my thanks and congratulations to
23 the team for putting this together. I think this is a
24 wonderful amalgamation of all these different things we're
25 doing.

1 Increasingly, the silos at the Energy Commission
2 are all coming together. I love, especially, the use and
3 deployment of second-life batteries. I think that's a
4 really promising, emerging new arena as you have a lot of
5 batteries that still have a lot of useful life, although
6 they may not be suitable for electric vehicles after some
7 number of years. And to incorporate that into the design
8 of something is brilliant and very strategic. So I love
9 this whole thing, from start to finish.

10 Congratulations to WatteEV and the whole team
11 there. And with that, unless there's other Commissioner
12 comments I'd invite Commissioner Monahan to move this item.

13 COMMISSIONER MONAHAN: I move Item 13.

14 CHAIR HOCHSCHILD: Okay. Commissioner
15 McAllister?

16 CHAIR HOCHSCHILD: Thank you. And Commissioner
17 McAllister would you be willing to second?

18 COMMISSIONER MCALLISTER: I'll second.

19 CHAIR HOCHSCHILD: All right, all in favor say,
20 aye, Commissioner Monahan?

21 COMMISSIONER MONAHAN: Aye.

22 CHAIR HOCHSCHILD: Commissioner McAllister?

23 COMMISSIONER MCALLISTER: Aye.

24 CHAIR HOCHSCHILD: Commissioner Douglas?

25 COMMISSIONER DOUGLAS: Aye.

1 CHAIR HOCHSCHILD: Commissioner Gunda?

2 COMMISSIONER GUNDA: Aye.

3 CHAIR HOCHSCHILD: And I vote aye as well. That
4 item passes unanimously.

5 Let's turn now to Item 14, Approval of the August
6 11th and August 17th Business Meeting Minutes. Is there
7 any public comment on this item?

8 MS. GALLARDO: This is Noemi the Public Advisor.
9 A reminder to attendees, if you would like to make a
10 comment please use the raise-hand feature on the screen. If
11 you're on by phone press *9.

12 Chair I do not see any hands raised, we may
13 proceed.

14 CHAIR HOCHSCHILD: Thank you. Commissioner
15 Douglas, would you be willing to move Item 14?

16 COMMISSIONER DOUGLAS: Yes, I move Item 14.

17 CHAIR HOCHSCHILD: And Commissioner McAllister
18 would you be willing to second?

19 COMMISSIONER MCALLISTER: Second.

20 CHAIR HOCHSCHILD: All in favor say aye,
21 Commissioner Douglas?

22 COMMISSIONER DOUGLAS: Aye.

23 CHAIR HOCHSCHILD: Commissioner McAllister?

24 COMMISSIONER MCALLISTER: Aye.

25 CHAIR HOCHSCHILD: Commissioner Monahan?

1 COMMISSIONER MONAHAN: Aye.

2 CHAIR HOCHSCHILD: Commissioner Gunda?

3 COMMISSIONER GUNDA: Aye.

4 CHAIR HOCHSCHILD: And I vote aye as well.

5 That item passes unanimously.

6 Moving on to Item 15, Lead Commissioner Reports,
7 let's start with Commissioner Gunda.

8 COMMISSIONER GUNDA: Thank you, Chair, and
9 there's kind of work happening that you could just bucket
10 as like a couple of things at a high level. There's been a
11 lot of focus on the liability issues and IEPR, so I just
12 want to extend my thanks again to the team on Item 8 that
13 we talked about today, on kind of developing the analysis.
14 And there's a huge team, and I mean I can't -- I mean, I
15 would like to name every single one of them, it will take a
16 while.

17 But I really want to provide some high-level
18 thanks to Mark Kootstra for the real analytical champion
19 that he's becoming and kind of becoming a leader in the
20 analysis on the supply side. Just a thanks to him, Chris
21 McLean and Hannah, the three of them have been really
22 focused on developing the loss load expectation analysis
23 and such. And as we heard this morning, Alana and Angela
24 have been focusing on the stack side. So just overall a
25 big thanks to the team.

1 And as Commission McAllister noted in his words
2 today, it is not easy to develop these products. To put
3 yourself out there and kind of open yourself up to
4 criticism. And there is none existing, so I'm extremely
5 proud of our team for taking the chance and having the
6 courage to develop these important products. And getting
7 the necessary feedback and taking it in stride to continue
8 to improve the product for the betterment of the state, so
9 just thanks to the team.

10 We have been working on the reliability front on
11 a couple items with Commissioner Douglas. Again, thanks to
12 her leadership on the permitting issues as they relate to
13 the emergency proclamation, but also her leadership and the
14 Siting's leadership on working with DWR in terms of
15 procuring some of the terminal generation. I will defer to
16 her to kind of provide a little bit more if she would like
17 to, but just big thanks to Siting on that as well.

18 And we did have a Senate Oversight Hearing on
19 Reliability. I just want to note that generally it went
20 really well. There is a continued ask from the Senate, as
21 well as I think the broader audience, both on improving the
22 data access as we study the liability. But also to really
23 think about how do we maximize the opportunity for DR, so
24 Commission McAllister, just flagging that for you as kind
25 of like your leadership on those elements, it keeps coming

1 up as an important issue.

2 There is work that is being done on the
3 reliability front, but kind of beginning to merge with SB
4 100 a little bit on the interconnection cue issues with
5 CAISO. Again I want to thank Commissioner Douglas and the
6 partnership with her on working with CAISO on those
7 elements. And defer to her to provide a little bit more.

8 And then the final item on reliability, I had an
9 opportunity to visit Russell City. An incredible thanks to
10 the Mayor as well as the Fire Chief and the City Manager.
11 It was a really great visit. I had an opportunity to visit
12 there with President Batjer. And lucky for me, her car
13 broke down that morning, so I had a chance to actually
14 drive with her and spend five hours and talk about
15 leadership. And I think that's what I want to pivot to an
16 important point she made.

17 I was asking her what were her takeaways from her
18 many, many years in leadership. And she just said
19 kindness, and just be kind to each other and lead with
20 kindness. And I kind of wanted to take that segue to just
21 note this has been an incredibly difficult year for a
22 number of us. And I think you know with the COVID, with
23 the racial justice it has particularly hit home for me.
24 Most of my family's in India and it's hard to visit them
25 during this time, so I do depend on a lot of friendship and

1 kindness both on the dais, on your friendships and the
2 staff friendships. So I just want to thank everybody for
3 disagreeing with me vehemently when you need to on policy
4 issues, but being a friend and kindness.

5 And many of you have shown simply a lot of good
6 gestures over the last year, but I just want to embarrass
7 Commissioner Monahan today a little bit. I don't get to do
8 that as much. Out of a blue I get a card from Commission
9 Monahan and it just asked me to take care of myself. So
10 I'm just surrounded by just wonderful spirit and
11 Commissioner Monahan, thank you so much for the love, with
12 love that you approach all of this work. So I just thank
13 you for your incredible friendship.

14 So with that I do want to move it to IEPR and
15 thank Heather and her incredible team for just jamming
16 through these IEPR workshops, one after the other. And
17 getting them all done in such a professional thoughtful
18 fashion. I know Commissioner McAllister is going to talk
19 about building de-carb and all the work we're doing there.
20 But I do want to flag just a couple things: the reliability
21 workshop series, and the natural gas workshop series, again
22 kudos to all the staff for their incredible work. And on
23 the natural gas to Melissa, Jennifer Campagna in their work
24 for moving the natural gas conversation steadily forward.
25 And then developing the relationship with CPUC on tackling

1 this transition from the fossil gas that we have to discuss
2 as we move forward here, so thanks to the entire team.

3 And I want to close in thanking Drew and Alicia
4 from the management team (indiscernible). And I could not
5 do any of my work without the wonderful Miina Holloway from
6 our office, Liz Gill and her thoughtfulness and smartness
7 and Le-Quyen. Thank you, Chair Hochschild, for sharing Le-
8 Quyen. I know you're (indiscernible) but it's been great,
9 so thank you and finally Sudhakar. So it's been a great
10 six months for me in this role. And I'm just incredibly
11 fortunate to have all of you in my life and then get to do
12 this important work.

13 CHAIR HOCHSCHILD: Well, well said. Let's turn
14 to Commissioner Monahan.

15 COMMISSIONER MONAHAN: I'm just dwelling on that
16 lead with kindness, what a great way to -- what a great
17 framing to start.

18 Well, I wanted to just share a few things about a
19 meeting that I had with Amazon, just because as we think
20 about how do we reach a zero-emission transportation future
21 big companies like Amazon need to be focusing and investing
22 in zero emission. And they are, so Amazon plans to have
23 10,000 electric vehicles in the next several years and
24 100,000 by 2030.

25 They are working with Christiana Figueres who you

1 may recall from the UN. She actually led a lot of the
2 international negotiations I think until -- or a good chunk
3 of the 2010s. She was the head and she started this
4 company -- not a company -- an NGO called Global Optimists.
5 They partnered with Amazon and now they took a Climate
6 Pledge to be net zero 10 years ahead of Paris by 2040.
7 They have over 100 other partners now signing on to that
8 same pledge.

9 And they have a pledge to be shipment zero, so
10 packages delivered to customers net zero in terms of carbon
11 emissions for the delivery. And they want to be halfway
12 there by 2030. So they've set these really ambitious
13 goals. And we talked more about like well what can we do
14 as the State of California to support Amazon as they do
15 this, especially when they're delivering into communities
16 disproportionately impacted by air pollution. And they're
17 very receptive to this conversation, so we're continuing
18 it.

19 I reached out to CARB and GO-Biz and Commissioner
20 Rechtschaffen. And they're all interested in joining this
21 conversation, so to me this is just a sign about how far we
22 have come. We still have a long way to go, but we are
23 seeing major companies investing in ZEVs, being willing to
24 put themselves out there and get other companies to do it
25 as well.

1 So I also wanted to let you guys know that the
2 Clean Transportation Program Investment Plan. The second
3 draft, draft number two, just dropped today. So it's not
4 just our Business, Meeting day folks, it's also the next
5 day for the investment plan. And it's not final. It's
6 still just a draft. And our first one, the team published
7 in April. And that was before this big infusion of 1.165
8 billion from the General Fund in ZEVs. Now the investment
9 plan includes that 1.165 billion and how we're going to
10 spend it to reach the goals.

11 The Legislature and the Governor have signed on
12 to 1,000 transit buses, 1,000 school buses, 1,250 drayage
13 trucks, as well as the build-out of light-duty ZEV
14 infrastructure and ZEV infrastructure for other medium and
15 heavy-duty purposes. So it's the biggest amount of money
16 we've ever spent on ZEVs hands down. Nothing comes close.
17 And but we're with -- Public Advisor Noemi Gallardo's help,
18 we're reaching and doing a lot of outreach to get feedback
19 on the plan.

20 We're having our advisory committee meeting next
21 week. We also, Noemi is hosting a Transportation
22 Electrification Roundtable with a lot of environmental
23 justice groups, so we're going to be sharing it there.

24 We have a meeting next week with the EV Charging
25 Infrastructure Strike Force, which is that collaboration

1 that I've been involved with, with NGOs, car companies,
2 EVSE providers and other interests to accelerate the
3 deployment of EV charging infrastructure.

4 So we're hopeful to bring this, the investment
5 plan to you in November. And move forward swiftly with
6 making these investments.

7 You may recall that we did not get
8 reauthorization of the Clean Transportation Program this
9 year. That's something that we, I think we'll be working
10 with the Administration to make sure that we have funding
11 going forward to continue these important investments.

12 One, let's see on the international front there's
13 been a fair amount happening. Alana Sanchez has been
14 really key in pulling a lot of these together. So Chair
15 Randolph and I met with the New Zealand Council General to
16 talk about zero emission vehicles. This week, we met with
17 leaders of COP26 as well as the International Council on
18 Clean Transportation, which is kind of I would say,
19 supporting the COP25 on the analytical side.

20 I'm also a Board Member on the Advisory Board for
21 the International Council of Clean Transportation. And I
22 was joined with a number of folks in ours that have done
23 the 2127 analysis. And what we really highlighted to the
24 leaders of COP26 is that we need to be really attentive to
25 building out ZEV infrastructure in a way that supports grid

1 resilience and our clean grid goals.

2 And one of the observations is that right now
3 historically it's this Balkanization right, where
4 transportation was done by folks like at EPA, Michael
5 Regan, who are not really steeped on the power side. And
6 our recommendation, and I think they heard it and agreed,
7 is that we really need to bring the power side and the
8 transportation side together as one. Because we can't look
9 at this as just like oh just set these ZEV policies and
10 then the infrastructure will just follow. That's just not
11 the case. And so I think they're going back to the drawing
12 board of thinking more well how do you integrate the power
13 side into these COP26 discussions?

14 And I think that's it. Oh, I guess one last
15 thing, we're having a retreat for the Fuels and
16 Transportation Division. We're going to do it outside and
17 be distance and really careful about COVID. But also look
18 for this as an opportunity to really think through how do
19 we make sure that we spend all this money that the
20 Legislature has given us really wisely, and with an
21 attentive -- really attentive to equity.

22 CHAIR HOCHSCHILD: Great. Thank you so much,
23 Commissioner.

24 Let's go to Commissioner McAllister.

25 COMMISSIONER MCALLISTER: Great well, thank you

1 Chair and everyone. This is really a great meeting, lots
2 of different topics and Commissioner Monohan's integrating
3 message I think and Commissioner Gunda's as well.

4 I mean I think that we're really living this
5 transformational period and like we're asking electrons to
6 do a lot of things and we need to get them connected, so
7 that they have the opportunity to do all those things in a
8 way that is kind of optimized. And then we have so much
9 technology to enable that, it's very exciting.

10 I wanted it -- was not planning on commenting on
11 this, but I wanted just to so Commissioner Monahan
12 mentioned Christiana Figueres. And you all may not know, I
13 was a Peace Corps volunteer in Costa Rica where she's from.
14 And her father Pepe Figueres, is the revolutionary that
15 overthrew a government that was trending towards
16 dictatorship way back in the day, I think early 40s. And
17 he was a true revolutionary. And her brother, Jose Maria,
18 was President later on. Pepe was president I think three
19 times during some really, really pivotal moments in Costa
20 Rica's history. And disbanded the military and just made
21 Costa Rica this really guiding light in democratic
22 movements across the globe.

23 And Christiana is really carrying that forward.
24 I mean you could also say revolutionary. And I think that
25 meeting kind of is evolving -- that (indiscernible) is

1 evolving. But it would be a great -- I mean we can dream -
2 - I think it'd be great to try to have her as a speaker at
3 the Energy Commission. I mean she's just such a global
4 figure. But I think there's so many dots that we are
5 connecting here in California, in a way that could be
6 instructive to many, many others. And we need that
7 collaboration at the very highest levels.

8 So and I absolutely love the focus on optimism.
9 So I think there's just yeah maybe it's time to begin to
10 really up our game in terms of ahead of COP makes all the
11 sense in the world to try to define an even more sort of
12 relevant or resonating leadership position for California.
13 I think we're in a position to do that given all the things
14 we're accomplishing here. So anyways, just an idea.

15 COMMISSIONER MONAHAN: I would clap my hands, if
16 we could do an emoji clap I'd be clapping.

17 COMMISSIONER MCALLISTER: Yeah, I was just a
18 lowly Peace Corps volunteer in a very forgotten rural place
19 in Northern Costa Rica during the late 90s, but I was
20 inspired by the Figueres family and continue to be so. So
21 anyway, I think we should think about that and then maybe
22 she would actually agree to come and do that.

23 CHAIR HOCHSCHILD: That would be wonderful, if
24 you could get her. Or we, I mean I think it was a great
25 idea.

1 COMMISSIONER MCALLISTER: Yeah, I mean we are a
2 global -- we are acknowledged as a global leader in this
3 stuff. And so I think there's no reason why that wouldn't
4 be in the realm of possibility. So yeah, let's figure out
5 how we can get in touch and maybe make that happen.

6 So let's see just a rundown a few things. I
7 wanted to also mention that, together with Commissioner
8 Monahan, I visited Russell City and just really found it to
9 be incredibly instructive just echoing what Commissioner
10 Gunda said. I know I think all five of us had been down
11 there now and really just echo all the gratitude to staff
12 and the city officials, the Mayor and City Manager and the
13 Fire Chief. And just a whole staff that's down there
14 working very closely together to make sure that systems are
15 in place. And that the rehabilitation goes well, and they
16 are online now. And they have been contributing so I think
17 it's very instructive. They were absolutely lucky that
18 something worse -- that there was no loss of life. But I
19 think that the lessons are actually being learned, which is
20 very positive. And I think it's strengthening
21 collaborations, so happy to see all that.

22 I mean and to actually hold the hunk of metal
23 that actually came through the roof, I mean it really made
24 it real. And seeing the impact on the pad of just the
25 forces that were in play when that happened. That's the

1 impact on the physical infrastructure of that. But that
2 breakdown was sobering.

3 A couple of weeks ago there was a hearing at the
4 Assembly Utilities and Commerce Committee. Chair Holden
5 convened it and it was on the building decarbonization
6 efforts in the state. Kind of keying off of AB 3232
7 assessment that we adopted last month on the 11th. And it
8 was really great actually.

9 I kicked it off just sort of on a very high-level
10 summary of that work. And then there were a bunch of
11 speakers echoing some of the themes there. And it was
12 really notable that the leaders in the Assembly that were
13 there present, including Chair Holden, just understand that
14 electrification is the primary decarbonization pathway for
15 our buildings. And they're not shying away from talking
16 about the big numbers that are going to need to be brought
17 to the existing buildings in our state in the many 10s of
18 billions of dollars over time. But we need to get at that
19 in earnest. And I think there's a growing acceptance that
20 that is the case. And so it was interesting and
21 heartening, I think, to see that (indiscernible) not shying
22 away from the fact of what a huge challenge that is. But
23 also we do big things in the state, and I think there's
24 just a -- I think Commissioner Gunda, you mentioned the
25 word "courage." And I think that really resonates with me.

1 I think, increasingly we're understanding and it's really
2 inspiring a lot of people in the state.

3 I did want to just take thank also on the IEPR
4 front, Heather and the whole team, just fast and furious,
5 so many workshops. In particular, on building
6 decarbonization we had a really fruitful day of workshop on
7 energy efficiency in a low-carbon world. So trying to
8 really understand how energy efficiency can help
9 decarbonization exercise. And we can optimize our
10 investments as we pivot towards clean electricity. We can
11 also do that in the most efficient way possible. And that
12 really is just the best of the Energy Commission and really
13 playing to all of our strengths and our authorities.

14 We also had a half day on embodied carbon in our
15 buildings. And then another half day on the refrigerant
16 issue around getting a handle on the global warming
17 potential of refrigerants as heat pumps proliferate
18 throughout the economy. So both are growing, I think
19 central issues in our overall decarbonization efforts.

20 I'm really happy to be collaborating with ARB and
21 PUC on the refrigerant front and across the board on our
22 decarbonization discussions. So that's really they've been
23 participating, Commissioner Rechtschaffen in a particular,
24 Commissioner Houk, have been participating in this IEPR
25 cycle. And that's just fantastic. They add so much to the

1 discussion and really looking forward to keeping that
2 coordination.

3 I wanted to thank Commissioners Gunda, Douglas,
4 I'm not sure who was at the Renewable Natural Gas one as
5 well. I know Commissioner Gunda and I think Commissioner
6 Douglas were there, but I was not able to make that day
7 unfortunately. There's so much going on in the IEPR that
8 we just can't be in multiple places, but just so many good
9 discussions going on that front. I want to express my
10 thanks to the IEPR natural gas team as well, just echoing
11 Commissioner Gunda's comments.

12 We heard about the MIDAS tool earlier and that
13 informational item. And I just think that's emblematic of
14 the increasing understanding and kind of centrality of this
15 load flexibility as a core resource to enhance reliability,
16 manage costs and make sure it does enhance equity in that
17 way. That it does help manage costs. And also along the
18 way it helps with our decarbonization journey, the time-
19 based use of energy when it's clean.

20 And SB 100 has shown the value of load
21 flexibility. It can actually keep rates down. It has it
22 has a modest we think, but important effect on tariffs and
23 so that absolutely is right front and center with equity.
24 And I think we're learning how to value the reliability
25 impact as well. And that's kind of one of these topics

1 that maybe goes in the bucket of new products and new
2 analytical tools that is important for us to continue to
3 get a handle on. Because I think we're going to be
4 surprised at how valuable load flexibility ends up being in
5 the context of reliability.

6 And some people are going to be surprised, but I
7 think that's part of the socialization of this idea as the
8 digitization and the modern electric grid in really making
9 sure that as, Commissioner Monahan, you said sort of the --
10 I don't know exactly how you put it, but the gas station is
11 sort of an ossified model. So I think we also can bring
12 this creativity and we don't need to be limited by the
13 status quo in terms of what we can do with our loads and
14 integrating them into a nimble grid. And so that's both on
15 the transportation side and the building side and really
16 across our economy.

17 So I'm really excited about all these
18 possibilities and we're doing many things on that front,
19 the load management standards being one. But also the
20 flexible demand of client standards, support in the
21 building code for load flexibility, a lot of different ways
22 that the state is supporting batteries and behind-the-meter
23 resources. And distributed resources that enhance
24 flexibility of the grid. And also our R&D indeed efforts,
25 you know the CalFlexHub, so really lots of great things

1 going on in this space.

2 And then finally, I just wanted to -- you know,
3 Lauren's presentation was great this morning. And I wanted
4 to just call out my Fellow whose time is wrapping up as
5 well, Ashin Kun Yee, (phonetic) who is a PhD student at
6 Stanford. And has really been helping us on the data
7 front, and there are a lot of moles of whack and kind of
8 barriers to smooth out as we get data in-house. And her
9 knowledge in that front and sort of vision for what we
10 could be using, the integral meter data and other data has
11 been really helpful for us on working with that team.

12 And then, finally, I wanted to thank Gaylene
13 Cooper for stepping in to my Executive Assistant's Laura
14 Castenda, who's out on maternity leave. Congratulations to
15 Laura and she has a new baby girl who's beautiful. But
16 Gaylene has stepped in and really is helping my office
17 tremendously so thanks to Gaylene.

18 And then Bryan and Fritz and Bill have just been
19 pulling double duty on a number of fronts, so thanks to my
20 team there as well, so that's it for me. Thank you.

21 CHAIR HOCHSCHILD: Thank you.

22 Let's go now to Commissioner Douglas.

23 COMMISSIONER DOUGLAS: Great, well thank you.

24 And I wanted to report on just a couple things. One is
25 that the first Energy Commission approvals for two

1 emergency in-temporary generators, the ones at Roseville
2 and Greenleaf, came out today. So I want to thank the
3 Executive Director Drew Bohan. And also just acknowledge
4 the tremendous inner-divisional team that did this work.
5 And particularly Shawn Pittard, Geoff Lesh, Eric Knight
6 from the STEP management side. Linda Barrera and Kerry
7 Willis from Chief Counsel's Office, but also the full team
8 that did this work and so just to go through the list for a
9 minute if you'll indulge me. Steven Kerr, Ashley
10 Gutierrez, Joseph Hughes, Carol Watson, Andrea Stroud,
11 Gabriel Roark, Lisa Worrall, Brett Fooks, Abdel-Karim
12 Abulaban, Shahab Khoshmashrab, Kenneth Salyphone, Laiping
13 Ng, and Anwar Ali. And then Chief Counsel's Office as
14 well: Jared Babula and Lisa DeCarlo.

15 And I bring up all of these folks, because when
16 the Energy Commission did the review of these two sites, I
17 just want to make sure it's clear, it wasn't just a quick
18 check the box exercise. We very much did have a self-
19 certification form. It did have specific components that
20 the Energy Commission under our rules is asking for in
21 every instance. But staff did a really thorough job of
22 just looking at each application, considering the
23 environmental setting, considering the context, asking good
24 questions about what issues might come up. And doing a
25 very reasonable level of analysis of issues, proposing and

1 working with the sites on specific steps that they might
2 take to ensure that there weren't issues.

3 Staff went out and sent biologists to visit the
4 Roseville site to check out put any potential biological
5 issues. So there's a lot of work that goes into these and
6 it's really important that we take the environmental review
7 and analysis seriously. And the staff team really did
8 that, even as they moved very quickly. So I just want to
9 thank all of them for that work and acknowledge that as we
10 also acted today on the process set out in the Emergency
11 Proclamation for battery facilities, battery energy
12 storage.

13 So I think we will see applications come into
14 that process. I think we will see some potential
15 amendments come in. I think all of these processes set out
16 in the proclamation are likely to be used. And so I just
17 want to thank the team very much from the Executive
18 Director on through to everyone whose name I read. And
19 also, of course, Commissioner Gunda and his advisors. And
20 to all of you, my colleagues who are working, we're all
21 working together to manage our short-term, midterm and
22 long-term issues as we push towards a clean energy
23 electricity system. And it's exciting to see what we're
24 able to do here.

25 And so the couple of quick additional updates, so

1 are in terms of offshore wind. I wanted to say we did a
2 North Coast tribal visit that was coordinated by the Energy
3 Commission. And we also had participation from Natural
4 Resources Agency, Ocean Protection Council, and the Coastal
5 Commission. So the Chair and I went in addition to the
6 Public Advisor and one of our ERDD staff. And we also kept
7 the visits small, but it was a really great opportunity to
8 talk to a number of North Coast tribes about both some of
9 their energy achievements. And their energy interests and
10 goals, which are significant and also about offshore wind
11 and their engagement around offshore wind projects.

12 Tomorrow the Coastal Commission is having an
13 informational hearing on offshore wind for their
14 Commission. And so I will speak at that early on, just to
15 tee up the issue and to highlight the fact that we have
16 this very strong interagency joint relationship. And we're
17 working very closely with the Coastal Commission and
18 Department of Fish and Wildlife and Ocean Protection
19 Council and State Lands Commission and broadly with state
20 agencies at the Public Utilities Commission as part of
21 this. So really broadly we're working as the state to
22 understand and assess and move this issue forward.

23 The Coastal Commission is the first state agency
24 to have an official action related to offshore wind. And
25 the current timeframe is that they would be considering

1 potential consistency determinations for leasing in
2 offshore wind areas in California in the March to June
3 timeframe for the two different areas in California. And
4 that timeframe would enable BOEM to move forward with
5 leasing in the fall. So that's the current timeframe that
6 we were looking at.

7 And obviously that just points out how there's
8 going to be really intensive work on offshore wind, on both
9 the North Coast and Central Coast, between now and really
10 this time next year and beyond.

11 So I want to encourage anyone who's listening to
12 this to attend the Coastal Commission workshop. Sign up
13 and speak. Their process is that you have to go to their
14 website and sign up and fill out a speaker form. It's
15 great if you do that in advance, even a day in advance,
16 because that's how you get the Zoom link to be able to go
17 in and speak. I've had to do that too, so I have filled
18 out my speaker form or specifically Ali has filled out my
19 speaker form for me. Thank you, Ali.

20 So anyway, I want to encourage folks to do that.
21 And I think the last thing I will say is that I want to
22 acknowledge DWRs hard work on supporting the energy efforts
23 here in California. I should have said that earlier.
24 They've been tremendous partners. And I want to express
25 appreciation for the amazing IEPR workshops. I have not

1 had to do much work to help create them. All I have to do
2 is say yes I'll be there and dial in. And I've learned a
3 lot and I really appreciate that, so that's my report.
4 Thank you.

5 CHAIR HOCHSCHILD: Thank you, Commissioner.

6 I am having a technical issue, so I'll be off
7 video, but I wanted to just begin by thanking you for all
8 the tribal work. I was so grateful to join you for a week
9 along with Naomi Gallardo and Katrina Leni-Konig and Tom
10 Gates and a few others for this visit with a bunch of the
11 tribes up in the North Coast was an amazing week. We were
12 able to visit a couple the micro grids, solar battery micro
13 grids that we funded up there.

14 And a particularly powerful visit with the Yurok
15 people who are doing this incredible restoration just to
16 share the story with everyone. The Yurok people believe
17 their purpose in this life is to restore balance with
18 nature. And so they are doing a whole bunch of things
19 including reintroducing Condor who went extinct in that
20 area by the Klamath River 100 years ago. And they're
21 reintroducing them starting next year, introducing six
22 Condors a year for the next 20 years. And they're working
23 very diligently and I think very effectively towards the
24 demolition of these four dams on the Klamath, which looks
25 to be on pace to happen in the next year-and-a-half or two

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1 years. And to help restore the salmon runs. So we had
2 some terrific visits with them and they're very interested
3 in the kind of tribal micro grids that we have funded.
4 We've done now seven of those around the state, so it was a
5 super fruitful week. And we look forward to continuing the
6 partnership.

7 There are a group of tribes up there. There's
8 eight tribes in Humboldt County and they have this vision
9 to make that region the first carbon negative region in the
10 world. So this is a combination of electrification of
11 everything, efficiency, renewables and offshore wind,
12 combined with carbon friendly land management. So really
13 an inspiring visit learning all that and we'll be
14 continuing to engage.

15 But a special thanks to Jana Ganion at the Blue
16 Lake Rancheria ranch area who has really been a remarkable
17 leader and partner. And to Tom Gates for all the terrific
18 work over many, many years on our tribal program here at
19 the Energy Commission.

20 So I wanted to second as well what Commissioner
21 Gunda was saying, which was about gratitude for all the
22 support for each other. I thought 2020 was tough and 2021,
23 the number of things -- we got hurricanes and fires and
24 smoke and this COVID Delta surge and the crisis in
25 Afghanistan and so many other things. You know, in these

1 times we have to come together and really support each
2 other deeply and in a sustained way. And I really feel
3 that strongly at the Energy Commission.

4 I think the family that we have here at the
5 Energy Commission is extraordinary and I'm seeing just
6 incredible dedication and support and teamwork. And I just
7 want to lift that up. That's how we get through these
8 tough times, so thank you Commissioner Gunda for starting
9 us off that way.

10 A couple of things to share. I had three
11 international meetings, two with governors in Mexico last
12 week: the Governor of Nuevo Leon and the Governor of Baja,
13 both of whom are new and young. I think each were in their
14 early 30s and I don't know what I was doing my early 30s,
15 but it certainly wasn't being a governor. And I have to
16 say just enormously impressive and really focused on green
17 platform, so we had a great exchange with both of them
18 about electric vehicles and renewables and a bunch of other
19 stuff. Thank you to Alana Sanchez and Anna Ferrera for
20 facilitating all of that.

21 I also met yesterday with the Energy Minister of
22 New South Wales, Australia who is really leading
23 Australia's renewable energy efforts and we're going to
24 look at maybe signing an MOU with them.

25 I had as well, a visit with about 15 legislators

1 down at Tesla talking about Lithium Valley and the nexus
2 with electric transportation. Tesla is booming. They have
3 a backlog now, I think it's a six-months backlog to get a
4 car, which is great to see the demand so high for electric
5 vehicles and manufacturing continuing to thrive in
6 California.

7 And I think I will stop there. I also met with
8 Cecilia Aguiar-Curry who is going to be joining me for this
9 trip, an offshore wind trip we're doing to Portugal with a
10 bunch of folks next month.

11 But I think I will stop there, and why don't we
12 continue with Item 16, Executive Director's Report?

13 MR. BOHAN: Thank you, Chair and Commissioners,
14 Drew Bohan here. I've just got three quick items. First,
15 Commissioner McAllister, thank you for the shout-out to
16 Gaylene. She is indeed a gem, and you need to work with
17 her as you've been doing regularly to really see the depth
18 of her knowledge and commitment, so thanks for that.

19 And Commissioner Douglas, thank you for the
20 acknowledgement of staff will save me going through, I will
21 not name everyone as you did. But thank you for doing so
22 for the package units at Roseville and Greenleaf. Everyone
23 you mentioned played an important role. This is 120
24 megawatts of power at a critical time in California, so
25 this was just great and it was moved very quickly. As you

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1 noted staff visited Roseville. I drove up to Greenleaf
2 last week and took a look as well. And as you noted, we
3 went above and beyond the requirements of the Emergency
4 Proclamation. We clearly met it's requirements, but we
5 looked at all the standard things we looked at. And I'm
6 just really impressed with staff's ability to quickly jump
7 on something like that and do such a good job.

8 And then finally our new building is open for
9 business. We're still encouraging staff to take advantage
10 of our very bullish approach to teleworking and to come to
11 the office as needed and I think staff are taking us up on
12 it. We're having 20 staff come in on a busy day and fewer
13 than that on many days. I look forward to the day when we
14 can all go back and earnest in big numbers, but for now I
15 think it's wise and most staff are taking us up on our
16 offer to telework and come in only when necessary. Thank
17 you.

18 Thank you, let's go to Item 17, the Public
19 Advisor's Report.

20 MS. GALLARDO: Hello there, Chair and
21 Commissioners, this is Noemi. So I also have three quick
22 items.

23 First, I wanted to let you know that for the
24 Clean Energy Hall of Fame we have selected the winners.
25 There was a selection committee formed of all external

1 stakeholders. They selected six excellent candidates and
2 they will be -- we haven't announced them publicly yet, but
3 I'm hoping to share those names with you in the next few
4 weeks.

5 Second, we wanted to let you know that the
6 Disadvantaged Communities Advisory Group, which is our key
7 advisory group for the agency and also for the Public
8 Utilities Commission is working on an annual report. And
9 I'm hoping that they can share that with you during a
10 business meeting in the next couple of months as well. SO
11 I just wanted to let you know they're working hard,
12 continuing to provide us great advice. And hopefully, you
13 can see them soon.

14 And then finally I wanted to let you know
15 internally we're still moving along with the Inclusion,
16 Diversity, Equity and Access Initiative, also known as
17 IDEA. So my partner Carousel Gore, and I are working on
18 that and wanted to let you know that the staff had made
19 some excellent recommendations on improvements for our
20 workplace and hopefully we'll be implementing those shortly
21 as well, and can talk to you more about that. And we do
22 have several employee resource groups that are also working
23 hard to improve the workplace and make it an even more
24 belonging place where we practice kindness, as was
25 mentioned earlier.

1 So that's it for me. Thank you so much, it was
2 good to see you all.

3 CHAIR HOCHSCHILD: Thank you, do we have public
4 comment?

5 MS. GALLARDO: This is Noemi again. Let me give
6 the instructions for the public, this public comment
7 period.

8 So this is the period for any person wishing to
9 comment on information items or reports of the meeting
10 agenda or any other items. Each person has up to three
11 minutes to comment and comments are limited to one
12 representative per organization. We may reduce the comment
13 time depending on the number of commenters. Use the raise-
14 hand icon to indicate your interest in making public
15 comment. If you're on the phone press *9 to raise your
16 hand and *6 to unmute. After you are called on, please
17 restate and spell your first and last name, state your
18 affiliation if you're representing a tribe, agency,
19 organization or any other entity. And do not use the
20 speakerphone when talking, because we won't hear you
21 clearly.

22 So let me check to see if we have any hands. We
23 do have at least one hand, so it looks like this is Steve
24 Uhler. Steve, a reminder to spell your name, indicate your
25 affiliation if any. Your line is open and you may begin.

1 MR. UHLER: Thank you, Commission. This is Steve
2 Uhler, U-h-l-e-r. I'd like to thank the Commission for
3 acknowledging my comments today, particularly related to
4 planning. I would like to bring you up to speed on some of
5 my notions. I would like to be able to completely plan
6 grid operations in Butte County. Butte's had a tough time.
7 Oroville Dam Generation shut down. And I'd also like to do
8 the same thing for Alameda County. They lost the Russell
9 City Energy Center. I'm particularly interested if that
10 carcass, whatever was launched is a capacitor carcass from
11 a shunt capacitor bank.

12 So I've been in contact with Angela Tanghetti and
13 pointing her in the direction of the additional data I
14 need. But I hope to be able to display complete material
15 resource planning for the grid.

16 And also to go along with that since just
17 planning what you have as far as capacity is not enough
18 I've had a long-time requests for data structures from
19 smart meters, so that I can dig into smart meter data,
20 process it and pull out things like instantaneous load and
21 power factor. I'm not sure of the familiarity you folks
22 have with apparent real and reactive power, but we want to
23 drive reactive power out of the system. Because that's you
24 may have capacity, but your generation and your prime
25 movers have got to be able to supply the apparent power,

1 which can be much higher.

2 So those have to be considered in all planning
3 for reliability. And things like knowing the status of a
4 shunt capacitor bank on all power plants before we go into
5 a tough situation, because these devices compensate for
6 power factor to try to bring it to unity, so that the
7 system is more efficient.

8 So I'm looking forward to hearing from Angela on
9 the items that I'm looking for, as far as data. And I'd
10 really like to find out about the structures of the smart
11 meter data systems, so that I can be prepared to process
12 all that data.

13 I'm looking to give you information on one-minute
14 time slices instead of hours or for the whole western grid.
15 And my experience says I'm totally capable with the
16 hardware and hardware and systems you already have.

17 So once again I thank you for acknowledging my
18 comments. This is the end of my comment. Thank you.

19 MS. GALLARDO: Thank you.

20 Chair, I do not see any others hands raised. You
21 may proceed.

22 CHAIR HOCHSCHILD: Okay. Let's go to our final
23 Item 19.

24 MS. BARRERA: Good afternoon, Commissioners. The
25 Chief Counsel's Office does not have a report today.

1 CHAIR HOCHSCHILD: Okay. Thanks everyone, we're
2 adjourned. Have a good day.

3 (The Business Meeting adjourned at 2:28 p.m.)

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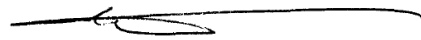
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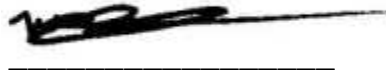
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