

DOCKETED

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DOCKETED

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BUSINESS MEETING

BEFORE THE

CALIFORNIA ENERGY COMMISSION

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

WEDNESDAY, OCTOBER 12, 2022

10:00 A.M. - 3:30 P.M.

In-person at:
California Natural Resources Agency Building
715 P Street
First Floor Auditorium
Sacramento, California 95814
(Wheelchair Accessible)

Option for Remote Public Access via Zoom.

Please note that the CEC aims to begin promptly at the start time and the end time is an estimate based on the agenda proposed. The business meeting may end sooner or later than the time indicated depending on various factors.

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.

Reported by:
Peter Petty

APPEARANCES (*Present via Zoom)

Commissioners

David Hochschild, Chair
Siva Gunda, Vice Chair
Andrew McAllister
Patty Monahan
Kourtney Vaccaro

Staff Present:

Drew Bohan, Executive Director
Linda Barrera, Chief Counsel
Jimmy Qaqundah, Assistant Chief Counsel
Noemí Gallardo, Public Advisor
Dorothy Murimi, Public Advisor's Office
Kirk Oliver, Chief Counsel's Office
John Heiser, Compliance Project Manager

Also Present

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e. National Environmental Management Institution Committee (NEMIC).	
f. Certification of Updated 2022 Single-Family Residential Alternative Calculation Method (ACM) Reference Manual, 2022 Nonresidential and Multifamily ACM Reference Manual, and California Building Energy Code Compliance Software (CBECC-RES 2022.2.0 and CBECC 2022.2.0).	
i. Updated 2022 Single-Family Residential ACM Reference Manual and Nonresidential and Multifamily ACM Reference Manuals, which were previously certified pursuant to Public Resources Code (PRC) section 25402.1(e).	
ii. Updated 2022 public domain residential, nonresidential, and multifamily software (CBECC-Res 2022.2.0 and CBECC 2022.2.0), which were previously approved pursuant to PRC section 25402.1(a).	
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i. <i>Interlink Products International, Inc. v. Xavier Becerra, Drew Bohan, Melissa Rae King (United States District Court for the Eastern District of California, Case No. 2:20-cv-02283)</i>	
ii. <i>Okemiri v. California Energy Commission, et al. (Sacramento Superior Court, Case No. 34-2018-00246019).</i>	
b. Pursuant to Government Code section 11126(e)(2), the CEC may also adjourn to closed session with its legal counsel to discuss facts and circumstances in the following matter that may warrant the initiation of litigation:	
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1 P R O C E E D I N G S

2 OCTOBER 12, 2022

10:03 a.m.

3 (Start of Introductory Video.)

4 MS. MURIMI: Welcome to the California Energy
5 Commission Business Meeting. Zoom's closed-captioning
6 feature has been enabled to make Energy Commission business
7 meetings more accessible. Attendees can use this feature
8 by clicking on the "Live Transcript" icon and then
9 selecting either "Show Subtitle" or "View Full Transcript."
10 Closed captioning can be stopped by closing out of the Live
11 Transcript or selecting "Hide Subtitle." Those
12 participating solely by phone do not have the option for
13 closed captioning.

14 The Energy Commission will continue to post a
15 recording of this business meeting on the Business Meeting
16 webpage in addition to posting a transcript of this
17 business meeting rendered by a professional court reporter
18 in the docket system on the business meeting webpage.

19 To increase access to the California Energy
20 Commission's proceeding, this meeting is being held in-
21 person and is also available for remote participation.

22 The public can participate in the business
23 meeting consistent with the instructions for remote
24 participation found in the notice for this meeting, and as
25 set forth on the agenda posted to the Energy Commission's

1 website. Pursuant to California Code of Regulations Title
2 20, section 1104(e) any person may make oral comments on
3 any agenda item.

4 Once the public comment period begins, to
5 indicate you would like to give a comment in-person please
6 use the QR codes shown in the room and fill out the form.

7 For remote participants, please raise your hand
8 by clicking on the "Raise Hand" icon at the bottom of your
9 screen. If you are joining by phone, press *9 to raise your
10 hand and *6 to unmute.

11 To ensure the orderly and fair conduct of
12 business, public comments will be limited to three minutes
13 or less per person for each agenda item voted on today.

14 Any person wishing to comment on information
15 items or reports which are non-voting items shall reserve
16 their comment for the general public comment portion of the
17 meeting and shall have a total of three minutes or less to
18 state all remaining comments. After the Public Advisor
19 calls on you to speak, spell your name and state your
20 affiliation, if any.

21 Welcome to the California Energy Commission's
22 business meeting. The meeting will now begin.

23 (End of Introductory Video.)

24 CHAIR HOCHSCHILD: Thank you, and good morning
25 friends. I'm David Hochschild, Chair of the California

1 Energy Commission. Today is Wednesday, October 12th. I
2 call this meeting to order. Joining me are Vice Chair
3 Gunda, Commissioner Vaccaro, Commissioner McAllister and
4 Commissioner Monahan.

5 Commissioner McAllister, welcome back from your
6 trip to Australia, good to have you home. And let's begin
7 by having Commissioner McAllister lead us in the Pledge of
8 Allegiance.

9 (Whereupon the Pledge of Allegiance was recited.)

10 CHAIR HOCHSCHILD: Thank you. Today I'm happy to
11 announce the Commission is seeking to approve nearly \$54
12 million in investments in our meeting today, contributing
13 to our state's economic recovery.

14 I do want to clarify that a couple of items have
15 been removed from today's agenda. Item 1b, the Danish
16 Energy Agency Memorandum of Understanding and Item 3, the
17 Information Item on getting California on track for 2030
18 and 2045 climate targets, has also been removed.

19 Before we take up the Consent Calendar, I just
20 want to say it's great to be back in person in this amazing
21 building. This is only the second in-person meeting we've
22 had in this spectacular room. And I just want to say we've
23 been, I think very, very productive working remotely. But
24 there are definitely costs to that and I think building
25 personal relationships is one of those costs. And we're

1 committed to finding that balance and really helping the
2 next -- particularly the next wave of Energy Commission
3 staff coming in to work for the agency at this amazing and
4 exciting time to help build those relationships. And being
5 in a meeting today, it's a great opportunity to have lunch
6 with your colleagues, to reconnect.

7 We are entering what I would call the great
8 implementation. Okay, we're just not debating whether to
9 go big on climate solutions anymore, we're doing it. And
10 it's really a phase of incredible execution. And so on
11 behalf of all my colleagues, I want to thank all the Energy
12 Commission staff and stakeholders who've worked with us to
13 get us this point.

14 As we talked about last time, normally we would
15 get about \$1 billion a year and new resources annually from
16 the Legislature and the Governor. This year, combined with
17 the money we're getting from the federal government, it's
18 \$10.5 billion. It's historic, and we can do an amazing
19 amount of good with that, that I think is going to benefit
20 the state, the country, and the world. But it begins with
21 people and supporting the team we have on it. And I wanted
22 to just start with an opportunity to introduce some new
23 staff, and let's begin with Commissioner Monahan.

24 COMMISSIONER MONAHAN: Thanks, Chair. So I want
25 to introduce my new Advisor, Sarah Lim. Sarah, why don't

1 you stand up for us?

2 So Sarah is an attorney. And for nine years she
3 worked in the Committee on Natural Resources in the House
4 of Representatives, and she was the Chief Counsel there.
5 So I'm going to get some good legal advice, or at least
6 legal interpretations, which is really helpful to me.

7 So I want to just welcome, Sarah, and say to all
8 the Energy Commission staff, please do welcome her. She's
9 new to state service, new to California, so has a lot to
10 learn. And I think she's really going to enjoy being part
11 of the CEC culture. Please welcome her as I have. I also
12 think it's okay on Sarah's part that I disclose that she's
13 an avid surfer and a mom. So she doesn't just work and she
14 doesn't just do legal work, but she also has a big life
15 beyond work.

16 CHAIR HOCHSCHILD: Tough act to follow, wow.
17 And Commissioner McAllister, you have --

18 COMMISSIONER MCALLISTER: Yeah, really. I just
19 wanted to let everybody know I have two new advisors. As
20 you know, Fritz Foo went back to staff after a couple of
21 years in my office, and so it took more than one person to
22 replace Fritz. So I had brought Morgan Shepherd over from
23 the Existing Buildings Office in the Efficiency Division,
24 and David Johnson from the Appliances Office in the
25 Efficiency Division. Both of them are just really

1 wonderful, collegial, incredibly quick studies.

2 David has multiple degrees, culminating in a PhD
3 and is a really incredible engineer, but also with a broad
4 skillset that I think is going to really add a lot of
5 value to the Commissioner row, and to the Commission as a
6 whole.

7 Morgan has been working on Load Management Standards, which
8 we'll talk about a little bit later in this meeting.

9 And also just has -- Chair, as you mentioned,
10 we're entering the production mode for just getting it
11 done. And that's going to require a lot of interaction
12 with stakeholders, a lot of just outward-facing heavy
13 lifting, trust-building across our a huge, diverse, great
14 state. And I think Morgan has a skillset that really is
15 going to prove very valuable for that process for my
16 office. So just really looking forward to incorporating
17 both of them.

18 And again, just as Commissioner Monahan suggested
19 just welcome them to Commissioner row and I'm sure you'll
20 look forward to -- you'll have a good experience working
21 with them as well. So thanks for letting me introduce
22 them.

23 CHAIR HOCHSCHILD: Great.

24 Any other introductions? Yes, Commissioner
25 Vaccaro.

1 COMMISSIONER VACCARO: Thank you, Chair
2 Hochschild. I too have a new advisor who just started last
3 week. I am over the moon to announce that Andrea McGary,
4 who's a 20-year attorney that was recently was an
5 Administrative Law Judge with the California Public
6 Utilities Commission, joined last week. We need the help
7 in my office right now and I think she's going to do a
8 great job.

9 I think, along with Commissioner Monahan's
10 advisor and our existing legal team, we have a solid legal
11 team who gives us really great interpretation and just
12 having the attorneys on the row is going to be helpful.
13 But I really just want to recognize Linda Barrera and her
14 team. The fact that I'm bringing on an attorney just means
15 that I am the Attorney Commissioner. It helps me, but we
16 still look to you and your really solid team to provide us
17 with that great legal advice and support. So I just wanted
18 to acknowledge you, and your team as well.

19 So in any event, thank you for the few moments
20 just to express how over the moon I am about this new hire.

21 CHAIR HOCHSCHILD: Thank you, Commissioner. And
22 welcome, Andrea, good to have you on the team.

23 Let me see if the Executive Office or Chief
24 Counsel had anyone you wanted to announce or welcome.

25 MS. BARRERA: Thank you, Chair. The Chief

1 Counsel's Office has added new members to its team, and
2 you'll hear from two of them today. First is Kari
3 Anderson. She's an Attorney IV, and also we have Hank
4 Crook. And we have Tanner Kelsey, who is here also. And
5 last but not least is our new edition, actually two new
6 editions, we have Danielle who's here in the back, and Ash
7 Neo (phonetic).

8 CHAIR HOCHSCHILD: Great, welcome to you all.

9 Okay, with that we'll turn now to the Consent
10 Calendar. There will be recusals by Commissioners for the
11 first two items, which requires that we separate the items.
12 But first we'll vote on Items 1a through 1f, 1h and 1i; is
13 that correct?

14 So do we have any public comment for Items a
15 through f, h and i?

16 MS. MURIMI: Thank you, Chair.

17 So just a few instructions for folks. Once
18 again, there are QR codes located in the back of the room
19 for individuals that would like to make a comment that are
20 in the room. And for individuals on Zoom go ahead and use
21 the raised-hand feature, it looks like an open palm at the
22 bottom of your screen.

23 Giving that one moment. Seeing no comments,
24 Chair. I'll hand the mic back to you.

25 CHAIR HOCHSCHILD: Okay. Unless there is

1 Commissioner discussion, is there a motion from Vice Chair
2 Gunda, for those items?

3 VICE CHAIR GUNDA: Yes, Chair. I move Items 1a
4 through f, h and i.

5 CHAIR HOCHSCHILD: Okay. And is there a second?
6 Commissioner Vaccaro, would you be willing to second?

7 COMMISSIONER VACCARO: Oh yes, I second.

8 CHAIR HOCHSCHILD: Thank you. All in favor say
9 aye.

10 Vice Chair Gunda?

11 VICE CHAIR GUNDA: Aye.

12 CHAIR HOCHSCHILD: Commissioner Vaccaro?

13 COMMISSIONER VACCARO: Aye.

14 CHAIR HOCHSCHILD: Commissioner McAllister?

15 COMMISSIONER MCALLISTER: Aye.

16 CHAIR HOCHSCHILD: And Commissioner Monahan?

17 COMMISSIONER MONAHAN: Aye.

18 CHAIR HOCHSCHILD: And I vote aye as well. Those
19 items pass unanimously.

20 We'll now turn to Item 1g, and ask Commissioner
21 Monahan to make some comments.

22 COMMISSIONER MONAHAN: On Item 1g I will recuse
23 myself from any discussion, consideration, and vote on the
24 proposed contract to the University of California Regents
25 on behalf of the Irvine Campus. For \$250,000 for a

1 contract funded by the Clean Transportation Program for
2 analysis to support decarbonization strategies that promote
3 deployment of heavy-duty fuel cell electric vehicles.

4 I currently serve as a member on the Board of
5 Advisors for the University of California Institute of
6 Transportation Studies. In that role I do not make
7 governance decisions on behalf of the Institute, but the
8 Board exists to provide guidance and oversight to the
9 UC Irvine's transportation research projects.

10 Additionally, I do not receive any compensation
11 in any form, including reimbursements or per diem for
12 expenses. Therefore, there is no financial interest in
13 which there would be a conflict of interest under the
14 Political Reform Act or Government Code section 1090.
15 However, in an abundance of caution I will recuse myself in
16 order to avoid any perception of a conflict of interest.
17 I'm stepping out of the room. I'm going to take my cell
18 phone so the Public Advisor can advise me when to return.

19 CHAIR HOCHSCHILD: Thank you.

20 We'll now turn to the Consent Item 1g. Is there
21 any public comment on Item 1g?

22 MS. MURIMI: Thank you, Chair.

23 So for individuals that are in the room, go ahead
24 and use the QR codes located in the back of the room. And
25 for individuals on Zoom use the raised-hand feature. If

17

1 you are calling in, press *9 to indicate that you would
2 like to make a comment.

3 Giving that one moment. Seeing none on Zoom and
4 none in the room, Chair, I hand the mic back to you.

5 CHAIR HOCHSCHILD: Thank you.

6 Unless there is Commissioner discussion,
7 Commissioner McAllister, would you be willing to move Item
8 1g?

9 COMMISSIONER MCALLISTER: I move Item 1g.

10 CHAIR HOCHSCHILD: All in favor say -- oh we need
11 a second, sorry. Vice Chair Gunda, do you want to --
12 (Overlapping colloquy.)

13 VICE CHAIR GUNDA: I second.

14 CHAIR HOCHSCHILD: Moved by Commissioner
15 McAllister, seconded by the Vice Chair. All in favor say
16 aye.

17 Commissioner McAllister?

18 COMMISSIONER MCALLISTER: Aye.

19 CHAIR HOCHSCHILD: Vice Chair Gunda?

20 VICE CHAIR GUNDA: Aye.

21 CHAIR HOCHSCHILD: Commissioner Vaccaro?

22 COMMISSIONER VACCARO: Aye.

23 CHAIR HOCHSCHILD: And I vote aye as well. That
24 item passes 4-0.

25 And now we will welcome back Commissioner

1 Monahan. And we will turn to the remaining item, which is
2 1j. And I will be recusing myself from this item. I will
3 recuse myself from any discussion, consideration and vote
4 on the proposed resolution for \$100,000 in membership fees
5 to VELOZ. I am currently a member of the Public Policy
6 Board of VELOZ representing the Energy Commission. In that
7 role, I do not make decisions on behalf of VELOZ. Together
8 with my colleagues on the non-voting Public Policy Board,
9 we lend policy guidance and support to the Board of
10 Directors.

11 Additionally, I do not receive any compensation
12 in any form, including reimbursements or per diem for
13 expenses. So, there is no financial interests in which
14 there would be a conflict of interest under the Political
15 Reform Act or the Warren-Alquist Act. However, in an
16 abundance of caution, I will recuse myself from the
17 discussion and vote on this item in order to avoid any
18 perception of a conflict of interest.

19 Vice Chair Gunda will lead the vote in my stead.
20 I will leave my video box on, mute myself and step out of
21 the room. And the Public Advisor will reach out once the
22 vote concludes, at which time I will return.

23 VICE CHAIR GUNDA: Thank you. Now let's turn to
24 the Consent Calendar Item 1j. All right, is there any
25 public comment?

1 MS. MURIMI: Thank you, Vice Chair.

2 So once again for individuals in the room, use
3 the QR codes in the back of the room. For folks on Zoom go
4 ahead and use the raised-hand feature. It looks like an
5 open palm at the bottom of your screen. Giving that one
6 moment.

7 Seeing no raised hands and nothing in the room,
8 Vice Chair back to you.

9 VICE CHAIR GUNDA: Thank you, Dorothy.

10 Is there any Commissioner discussion on this
11 item? No, don't see any. We'll take the vote now.
12 Commissioner Vaccaro, would you move the item?

13 COMMISSIONER VACCARO: Yes. I move approval of
14 Item 1j.

15 VICE CHAIR GUNDA: Commissioner Monahan, would
16 you second?

17 COMMISSIONER MONAHAN: I second.

18 VICE CHAIR GUNDA: We'll take the vote now.
19 Commissioner Vaccaro?

20 COMMISSIONER VACCARO: Aye.

21 VICE CHAIR GUNDA: Commissioner Monahan?

22 COMMISSIONER MONAHAN: Aye.

23 VICE CHAIR GUNDA: Commissioner McAllister?

24 COMMISSIONER MCALLISTER: Aye.

25 VICE CHAIR GUNDA: I vote aye as well. It goes

1 4-0, thank you.

2 CHAIR HOCHSCHILD: Good, we're getting our steps
3 in today. So we did Item 1, okay.

4 We'll turn now to Item 2, Amendments to the Load
5 Management Standards. Welcome Stefanie Wayland.

6 MS. WAYLAND: Thank you. Hello, Chair and
7 Commissioners. I'm Stefanie Wayland, Load Management
8 Standards Lead for the Efficiency Division. I am joined by
9 Kirk Oliver from our Chief Counsel's Office.

10 Staff at the California Energy Commission, or
11 CEC, have been working with stakeholders and interested
12 parties to develop these load management standards over the
13 last three years. I'm very glad to now present them before
14 the CEC. Next slide, please.

15 Load management, also known as demand management,
16 load flexibility or demand flexibility, is the process of
17 balancing supply and demand on the electric grid by
18 adjusting the amount of electricity that customers use --
19 their demand or load -- to the available supply from all
20 power plants. Next slide, please.

21 Load management rates and programs have a broad
22 array of benefits including saving customers who
23 participate in load shift programs money by allowing them
24 to use energy at low-priced hours rather than the most
25 expensive hours. This can also reduce the price utilities

21

1 pay for electricity, a savings which can be passed on to
2 all customers in the form of lower rates.

3 They improve grid reliability by reducing
4 electricity demand during peak hours, especially during
5 times of grid stress from things like wildfires, heat
6 storms, and other natural disasters.

7 They reduce greenhouse gas emissions by reducing
8 electrical demand during peak hours when the highest
9 emission power plants are operating.

10 They maximize the use of renewable energy that
11 may otherwise have been thrown away during the middle of
12 the day because there was not enough demand.

13 They increase customer choice by providing
14 electricity customers access to dynamic rates and demand
15 flexibility programs.

16 Finally, load management rates and programs
17 reward electricity customers who consistently use less
18 energy during peak hours. These customers, who often have
19 lower or fixed incomes, are unable to take advantage of
20 demand response programs that only reward customers for
21 reducing energy usage compared to other days where they use
22 more energy during peak hours.

23 On the right of the slide, we have a chart of
24 cost versus benefits. CEC staff analysis shows that over
25 the 15-year period following full implementation of the

1 proposed regulations, the standards will have costs of \$24
2 million versus benefits of \$267 million. The benefits are
3 bill savings from shifting energy away from peak evening
4 hours using smart thermostats and batteries. These savings
5 will go directly to electricity customers. Next slide,
6 please.

7 The Load Management Standards and the amendments
8 proposed today are adopted pursuant to the Warren-Alquist
9 Act of 1974. The relevant section is shown on the slide,
10 but most importantly this gives the CEC the authority to
11 adopt its load management standards for each utility
12 service area. These standards can include, but are not
13 limited to adjustments in rate structure to encourage off-
14 peak usage and control of daily electrical load, and
15 systems for the control of daily and seasonal peak loads.
16 Next slide, please.

17 The proposed amendments to the load management
18 standards cover the largest three investor-owned utilities,
19 the two largest publicly owned utilities, and Community
20 Choice Aggregators, CCAs, that deliver more than 700
21 gigawatt hours of energy annually. There are 12 CCAs that
22 can currently deliver that much energy to their customers
23 each year, and they are named in the standards. New or
24 growing CCAs that deliver more than 700 gigawatt hours per
25 year in the future will be included starting the year after

1 they provide that amount of energy to their customers.

2 In total, these utilities and CCAs supply over 75
3 percent of all electricity in California. Next slide,
4 please.

5 There are four primary requirements in the
6 standards. All four are necessary to provide electricity
7 customers with what they need to effectively manage their
8 usage in response to changes in electricity supply.

9 The first requirement is utilities and CCAs
10 upload all time-dependent rates to CEC's MIDAS database and
11 keep those rates updated whenever a rate changes or a new
12 rate is implemented. CEC staff built the Market Informed
13 Demand Automation Server, or MIDAS, to provide real-time
14 access to all time-varying rates. MIDAS can be accessed by
15 third-party service providers to help customers
16 automatically adjust their energy in response to
17 electricity prices, Flex Alerts, greenhouse gas emissions,
18 or other grid signals. Notably, the MIDAS database does
19 not and will not contain any private, confidential,
20 sensitive, or customer-specific data.

21 Second, utilities and CCAs implement a single
22 statewide standard method for providing automation service
23 providers with access to their customers' rate information.
24 Customers may then authorize one or more service providers
25 to access their rate information. Service providers use

24

1 this rate information to look up the customer's hourly
2 electricity prices in MIDAS and automate smart appliance
3 electricity usage to maximize bill savings.

4 Third, utilities and CCAs will be required to
5 develop opt-in retail electricity rates that change at
6 least hourly to reflect locational marginal costs and
7 submit those rates to the utility's governing body for
8 approval. If approved by ratemaking authorities, these
9 rates would provide customers with options for automating
10 response to hourly and sub-hourly price signals. If rates
11 are not approved by the rate-approving body, utilities and
12 CCAs must provide programs that enable their customers to
13 respond to hourly prices or grid signals provided by MIDAS.
14 They are not required to develop rates for street lighting.

15 If the utility or CCA cannot implement an hourly
16 marginal-cost based rate for a group of customers they must
17 implement a program that enables customers to optimize load
18 in response to hourly information from MIDAS.

19 And fourth, utilities and CCAs will be required
20 to integrate information about time-dependent rates and
21 automation technologies into existing customer education
22 and outreach programs. Utilities must reevaluate existing
23 programs and consider new ones to take advantage of the
24 economic and organizational efficiencies provided by MIDAS.
25 Education programs must also be updated, as most customers

1 are unaware of price-responsive automation technologies and
2 services.

3 These amendments are designed to enable everyday
4 demand flexibility by providing electricity customers with
5 the tools and information they need. They also enable
6 emergency response such as the following scenario.

7 We are on Day 3 of an extreme heat event hitting
8 the western United States. Advanced smart thermostats
9 download electricity prices, and the information shows the
10 prices will be high in the late afternoon. Power plants
11 will emit more greenhouse gasses from 4:00 to 8:00. And
12 the State Independent Operator has issued a Flex Alert for
13 3:00 to 9:00 p.m. The advanced thermostats automatically
14 adjust the temperature settings to cool before 3:00 and to
15 set the evening temperature four degrees higher than the
16 normal temperature.

17 At the same time connected water heaters, heat
18 water before 3:00 and store it for later use. This keeps
19 homes and businesses comfortable while also providing the
20 grid the relief needed to avoid rolling blackouts. Next
21 slide, please.

22 There are the six major milestones for the
23 standards. We worked with CPUC staff to ensure alignment
24 with their ongoing demand flexibility proceedings. If
25 adopted today, the updated Load Management Standards will

1 take effect on April 1st, 2023.

2 Utilities and CCAs upload existing time-dependent
3 rates, such as the time-of-use rates, by July 1st, 2023.

4 Utilities submit compliance plans by October 1st,
5 2023, and CCAs by April 1st, 2024.

6 By October 1st, 2024, the utilities and CCAs
7 submit the rate information access tool designed as part of
8 an upcoming CEC working group.

9 Next, IOUs submit rates to their governing body
10 for approval by January 1st, 2025. POUs follow on April
11 1st, and CCAs on July 1st.

12 Finally, by April 1st, 2026, POUs implement load
13 management rates or programs. IOUs implement by January
14 1st, 2027. And CCAs implement by July 1st, 2027. Next
15 slide, please.

16 Because we know that different situations require
17 different solutions the proposed amendments allow utilities
18 and CCAs to request delays, modifications, and exemptions.
19 These requests can be part of the initial compliance plan
20 or requested later.

21 The process is different for the investor-owned
22 utilities whose regulatory body is the CPUC than for the
23 publicly owned utilities and CCAs whose governing bodies
24 are officials elected by popular vote in their service
25 areas.

1 The modification, delay, and exemption process,
2 opens the door for utilities and CCAs to work with
3 regulators and their governing bodies to implement
4 solutions that best serve their customers, providing
5 customers with options to participate in load management
6 programs and rates. Next slide, please.

7 The process to get to this rulemaking has taken
8 three years. For two years, we worked with stakeholders,
9 utilities, and interested parties through outreach,
10 meetings, workshops, a detailed staff report, and public
11 comment periods.

12 Following the pre-rulemaking we began the formal
13 rulemaking in December of last year by publishing the
14 proposed amendments to the load management standards and
15 opening a 45-day comment period. This year we revised the
16 standard three more times based on comments we received
17 during the 45-day and three 15-day comment periods.
18 Throughout this process staff met with stakeholders and
19 interested parties repeatedly to understand the various
20 viewpoints. We believe that the proposed amendments
21 developed through this process will serve the people of
22 California well. Next slide, please.

23 That covers the proposed amendments to the Load
24 Management Standards. CEC staff recommend that
25 Commissioners vote to approve the proposed amendments to

1 the standards and adopt staff's finding that the action is
2 exempt from CEQA. Next slide, please.

3 Thank you very much for your time. We are now
4 available for questions.

5 CHAIR HOCHSCHILD: Thank you so much, Stefanie,
6 to you and Mike Sokol and the whole team who worked on
7 this. This is a lot of work to get to this state. Before
8 we go to public comment I wanted to turn it over to
9 Commissioner McAllister who had an acknowledgement.

10 COMMISSIONER MCALLISTER: So I'm going to make
11 some non-substantive comments just before the public --
12 non-substantive on LMS.

13 But I did want to just say a few words about
14 David Cuffee, who was a key member of the Load Management
15 Standard Team. And he left this world on September the
16 26th at the age of only 54. He was a cherished friend to
17 many, including here at the Commission. And many of whom
18 considered him not only a great coworker and team member
19 but also a friend. He served and supported his country,
20 his family, his adopted state, and the CEC. MIDAS is his
21 handiwork and Load Management Standards would not be what
22 they are or where they are today before us at this business
23 meeting without his incredible knowledge, skill, and care.

24 Our deepest sympathies are with his daughter,
25 mother, family and loved ones. And I know that many staff

1 across the Commission share these sentiments. And I wanted
2 to take this moment and it's really my honor to express
3 those sentiments today. So with that, I wanted to just
4 invite us to take a moment of silence to remember David.

5 (A Moment of Silence was observed.)

6 COMMISSIONER MCALLISTER: Thank you very much.
7 Let's invite some public comment.

8 CHAIR HOCHSCHILD: Thank you, Commissioner. And
9 our condolences to his family.

10 With that we'll go to public comment, Dorothy.

11 MS. MURIMI: Thank you, Chair.

12 So once again, for individuals that are in the
13 room use the QR codes in the back of the room and for
14 individuals that are on Zoom go ahead and use a raised-hand
15 feature. We'll begin with individuals in the room. Once
16 called on, go ahead and step up to the podium. Make sure
17 the light is green on the microphone and then begin your
18 comment. Katherine Larson.

19 MS. LARSON: Good morning, Chair Hochschild and
20 Commissioners, great to be here. My name is Katherine
21 Larson and I am with SMUD, the Sacramento Municipal Utility
22 District. SMUD would like to thank Commissioner
23 McAllister and the CEC staff for their commitment to
24 working with stakeholders throughout this process and
25 ensure that the Load Management Standards are ambitious but

30

1 practical.

2 In particular, we appreciate the revisions in the
3 third 15-day language that allowed POU rate-approving
4 bodies to decide to develop and offer rates or programs or
5 modify requirements after considering specified factors.
6 We believe these revisions reflect an acceptable balance
7 between the CEC statutory authority and the POU's
8 independent rate-making authority and expertise.

9 SMUD recognizes the importance of load
10 flexibility, and we're already piloting programs to learn
11 about the most effective ways for our customers to engage
12 with behind-the-meter devices. We appreciate the third 15-
13 day language that recognizes the importance of such efforts
14 as we design, test, and refine rates and programs that our
15 customers will adopt, enjoy, and actually stick with.

16 With that said, we'll also note that
17 implementation of the LMS won't be easy. In our own
18 experience it can be a quite lengthy process to study,
19 design and successfully implement these rates and programs.
20 And they may not always be appropriate for every customer
21 class. Developing a single rate identification number
22 access tool that works with all obligated utility systems
23 may be challenging, and upgrades to utility billing systems
24 can also be complex, time consuming and expensive. In
25 general though, we understand the flexibility afforded to

1 POU's and the third 15-day language is intended to mitigate
2 these challenges. But we have also submitted written
3 comments recommending some express clarifications in the
4 final statement of reasons as well.

5 Challenges notwithstanding, we believe the third
6 15-day language has substantially addressed all our most
7 significant concerns and we support its adoption today with
8 the clarifications that I've noted. We look forward to
9 continuing to work with the CEC on implementation. Thank
10 you very much.

11 MS. MURIMI: Thank you.

12 Next we have a Dan Buch. Apologies if I have
13 misstated your name. Please unmute on your end, you may
14 give your comment.

15 MR. BUCH: Good morning Chair Hochschild and
16 Commissioners. Thank you for the opportunity to comment on
17 this item. My name is Dan Buch, and I am the Branch
18 Manager in the California Public Utilities Commission's
19 Energy Division responsible for electric rate design and
20 demand response, among other things. CPUC staff is very
21 supportive of the LMS amendments that the CEC is
22 considering today. They are consistent with, and
23 supportive of several high priority initiatives at the
24 CPUC. And I want to highlight a few of those initiatives
25 to show just how closely aligned they are with the Load

1 Management Standards amendments that CEC is considering
2 this morning.

3 First and most recently just in July of this
4 year, the CPUC opened a new rulemaking to enable more
5 widespread demand flexibility through electric rates.
6 Preliminarily the scope of this demand flexibility
7 rulemaking includes reforming fixed charges pursuant to
8 Assembly Bill 205. Considering policies to enable
9 widespread demand flexibility through retail dynamic rates
10 in support of the state's electrification and distributed
11 energy resource initiatives. And facilitating investor
12 owned utility compliance with the anticipated updates to
13 LMS requirements.

14 Second, in April of this year the CPUC also
15 updated its Distributed Energy Resources Action Plan to set
16 the following aspirational goals which align with the
17 proposed LMS amendments. First by 2025, all utility
18 customer classes have access to multiple rate options,
19 including dynamic and real-time pricing rate pilots.

20 Second, available rates reflect time variant and
21 location-based marginal costs and are transparent,
22 equitable and aligned with Load Management Standards.

23 And third, by next year the CPUC plans to
24 initiate consideration of proposals to ensure that
25 customers, technology vendors, and third-party service

1 providers have access to pricing information for a wide
2 range of rates through a universal access-pricing platform.

3 I'll also note a couple of additional items. The
4 investor owned utilities are currently conducting two
5 dynamic rate pilots ordered by the CPUC that incorporate
6 components of the CEC's proposed to Load Management
7 Standards amendments that you will vote on later today.
8 And in May, CPUC staff released a Whitepaper with a
9 proposed CalFUSE framework that we believe fully aligns
10 with the proposed LMS amendments.

11 So in closing, I want to thank Commissioner
12 McAllister and CEC staff for their close and productive
13 collaboration with CPUC staff on the proposed LMS
14 amendments and for incorporating our feedback into the
15 final proposal. We see these standards as a crucial step
16 toward enabling widespread demand flexibility in the
17 electric system. And we look forward to continuing
18 collaboration with CEC through the implementation phase.
19 Thank you.

20 MS. MURIMI: Thank you.

21 Next we have Delphine Hou followed by V. John
22 White. Please state and spell your name, and you may give
23 your comment.

24 MS. HOU: Great. Good morning, Chair and
25 Commissioners. My name is Delphine Hou. I'm a Director of

1 California Regulatory Affairs at the California ISO.
2 Really pleased to be here. And I thank you so much for
3 Commissioner McAllister and all of this incredible CEC
4 staff to bring this important issue to the fore.

5 CAISO definitely supports this, but I do want to
6 go into a little bit of the why. We think there is
7 considerable latent potential to manage load. But the
8 other reason we really support this is because CAISO has a
9 very powerful signal that we use to signal what the grid
10 needs, and that is our locational marginal prices.

11 But what does that really mean? Let me break it
12 down to maybe three major components that are really
13 relevant here. They're very effective grid signals, because
14 first, it's a price. So if you are shifting load, and you
15 want to understand what the economic impact and tradeoff
16 that is, the LMPs can tell you that.

17 But another really important factor is that they
18 are a GHG signal. When the prices are high it typically
19 means there are emitting resources on the margin. When the
20 prices are low it typically means there are renewables or
21 low, non-emitting resources on the margin. So that is a
22 very strong and very easy-to-understand signal for the end
23 consumers to understand that when prices are high it's
24 likely a) not as economic for them to use electricity; and
25 is likely using emitting resources.

1 Lastly, and very important to the CAISO, it is a
2 reliability signal. As Stefanie noted, when we are in grid
3 emergency and in grid conditions the prices rise for a
4 reason, it is classic supply-and-demand. But it's also
5 signaling to the end consumer, "Hey, this is a time of grid
6 stress. Please do not use electricity if you can. If you
7 can shift that load, or don't charge your electric
8 vehicles, or provide back to the grid if you can do that as
9 well." So that's all a very effective, integrated signal
10 that comes from the grid that we hope more and more retail
11 consumers can discover.

12 But also, the CEC is doing this important
13 groundwork in terms of the database having the automation.
14 Because even I, working at the CAISO, I do not want to get
15 a five-minute electricity signal ever. But if I had the
16 devices, if I had the capability to set it and forget it,
17 but have everything my house, my electric vehicle, conform
18 with that to help the grid I think that would make me a
19 very happy consumer. But also it would potentially reduce
20 my costs and really reinforce everything that we're trying
21 to pursue and achieve as a state.

22 So again, we're very excited about this
23 foundational step. As Dan spoke from the CPUC we, the
24 CAISO, was also very supportive of the efforts there. And
25 we have encouraged the PUC to work very closely with the

1 CEC. And we're very glad that that cooperation is
2 happening.

3 So again, we're very supportive of this, we want
4 to be able to provide whatever the CAISO has as a signaling
5 to the end consumers, for consumers who can use this; and
6 we understand not every consumer can. But again, the idea
7 is that maybe with more technology, that will be a bridge
8 for all consumers to be able to adopt this. So again,
9 really support this effort, please approve this. And thank
10 you for your time.

11 MS. MURIMI: Thank you.

12 Next we have V. John White, followed by Katherine
13 Larson. Oh, apologies, followed by Eric (indiscernible).

14 MR. WHITE: -- Center for Energy Efficiency and
15 Renewable Technology. And I'm really, really happy to be
16 here today, because this proposal, along with the other
17 work that Commissioner McAllister is leading is basically
18 reinventing what we used to call "demand response." And
19 which has been lagging and falling behind. And we saw the
20 first week of September how important demand flexibility
21 and moving load around is.

22 And we saw -- based on a SMUD customer, so I can
23 tell you that it wasn't news to me -- that the strategy to
24 get through the days that are hot and expensive is cool
25 your house overnight into the middle of the day, and then

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1 raise the temperature in the afternoon. And the difference
2 in that message is that it's not sacrifice, it's proactive.

3 And so what this proposal does is further empower
4 customers, bypassing the historic resistance to time-of-use
5 pricing and demand response programs. The combination of
6 this strategy with the data that you are assembling and
7 compiling and hopefully making available to third parties,
8 combined with the Governor's budget initiatives, creates an
9 opportunity for us to really put wheels under demand
10 response. And have it ready as soon as we can, because we
11 know that '23,'24,'25,'26 summers and Septembers are when
12 we're going to be stressed.

13 So what this proposal does is enable us to catch
14 up with this resource being available to the grid, as the
15 ISO said, and the fact that the diplomacy and the
16 development of this rule has been spot on. You know, we
17 know there's always a temptation with the publicly owned
18 utilities to be a little directive. But the fact is, L.A.
19 and SMUD are leading the way on some of these initiatives.
20 And so we want to adapt some of what they've done to what
21 we need to get the IOUs and the PUC to do.

22 So I'm very encouraged. And I really think we're
23 at the beginning of a new era of demand flexibility, and
24 commend Commissioner McAllister and want to be there to
25 help on any, any way we can, because this is a foundational

1 strategy for California. Thank you.

2 MS. MURIMI: Thank you.

3 Next we have the individual labeled as "Call-in
4 User 2." Your line is open. Please unmute on your end and
5 you may begin your comment.

6 MR. UHLER: Hello, Commissioners. This is Steve
7 Uhler calling, U-H-L-E-R. This is a very important
8 subject. But I have noticed that staff has overlooked
9 posting whatever resolution and any other documents that
10 you're going to vote on today in the docket, so it's
11 currently not deemed a record for the proceedings. So
12 hopefully you can get that done.

13 Also, hopefully you had a chance to look through
14 my comments. They range from some recent ones that did
15 direct comparisons of language with questions about why
16 there are two pieces of language, one for CCAs and POUs,
17 and one for IOUs. Or why there's no exemptions for POUs
18 and CCAs, which I listed in my comments, my written
19 comments.

20 Also I'd like to -- I put that system together,
21 because I actually wanted to see what this whole thing
22 looked like. Because there's a lot of markups in the
23 express terms. Actually they go beyond what statute allows
24 and markup strikethroughs are only for regulatory language
25 that's approved.

1 But the other items would be related to MIDAS.
2 If we will look at it, it's 1623(b) or 1623.1(c), which are
3 almost exactly the same language, it says that the
4 Commission will maintain public access to MIDAS. And all I
5 have to do is give you a RIN and I'll get the information I
6 want. Well MIDAS currently doesn't work that way. So and
7 as you may know, once you write a regulation on how
8 something's supposed to be worked, you can't embellish it
9 with other writings such as a document that says you have
10 to get a password.

11 So I'm really suggesting that you table this at
12 least until you place into the record, or the staff place
13 into the record what you're voting on here today. I'm
14 particularly interested in why they talked about general
15 exemptions for hardships for utilities and CCAs when the
16 language explicitly limits that to IOUs. I would like
17 clarification on that.

18 And pursuant to your meeting laws, I am making a
19 request that you publish in the docket for the record what
20 you're voting on, the actual document. And when I see it,
21 I will continue my comments. This is quite unfair to the
22 public, because your List Service is unreliable so I use
23 your docket. If it's not in the docket I don't know about
24 it. So please take care of that.

25 Can I hear from the Chair if he's going to do

1 that? I'm asking you a question pursuant to your meeting
2 laws. Anybody hear me?

3 MS. MURIMI: Thank you for your comments. Your
4 time is concluded.

5 MR. UHLER: Do I get my public request, records
6 request resolved?

7 MS. MURIMI: Staff will reach out to you
8 regarding Public Records Act requests. Thank you.

9 MR. UHLER: This is --

10 CHAIR HOCHSCHILD: Thank you. Yeah, we'll have
11 the Public Advisor's Office respond.

12 Is there any further public comment on this item,
13 Dorothy?

14 MS. MURIMI: Yes, Chair. There's a few more
15 comments.

16 CHAIR HOCHSCHILD: Okay.

17 MS. MURIMI: We have Daniel Barad, B-A-R-A-D.

18 MR. BARAD: Good morning, Commissioners. Daniel
19 Barad on behalf of the Sierra Club, California, and our
20 500,000 members and supporters throughout the state. Thank
21 you so much for the opportunity to comment today. And we
22 thank the staff for all their work on this. We support the
23 amendments to the Load Management Standards proposed today.
24 And we strongly encourage the Energy Commission to continue
25 prioritizing load management and demand response

1 strategies.

2 As climate change threatens our grid the state
3 must continue to build out renewables at an unprecedented
4 rate, while investing in battery and long-duration storage,
5 so we can utilize clean energy even as the sun sets and
6 demand increases.

7 We also need to take actions like those proposed
8 today to shift energy demand to the parts of the day when
9 we are producing the largest amount of clean energy.
10 Policies that support SMART load management and storage
11 will help ensure that the state can keep lights on during
12 unprecedented heat waves without continuing to prop up the
13 fossil fuel infrastructure that continues to worsen these
14 climate-fueled events and negatively impacts public health.

15 Thank you very much for the opportunity to
16 comment and we look forward to continuing to support your
17 work on these critical issues.

18 MS. MURIMI: Thank you.

19 Next we have Patrick Welch followed by Ann
20 Santilli. Patrick please state your name, state and spell
21 your name, and give your affiliation. You may begin.

22 MR. WELCH: Patrick Welch, P-A-T-R-I-C-K W-E-L-C-
23 H, Senior Director of Energy Policy with the California
24 Municipal Utilities Association. I wanted to first thank
25 Commissioner McAllister and the staff involved, especially

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1 Stefanie Wayland, for working with us to address our
2 concerns on this proposed regulation.

3 CMUA shares the Commission's goals of providing
4 safe, reliable, affordable, clean energy, and we recognize
5 that flexible demand resources can be a valuable tool in
6 those efforts. To help achieve these shared goals, it's
7 paramount that the locally elected governing boards and
8 councils of CMAU's members maintain control over rates and
9 the rate design and development process. Maintaining this
10 local control ensures that POU rates are reflective of the
11 needs and values of the communities served by the POU's.

12 We support the approach of the current version of
13 the regulations as it ensures that POU governing boards can
14 shape the rate design process and initial stages and then
15 make the ultimate decision on whether to approve programs
16 or rates at the end of the process.

17 There are still important implementation issues
18 to address however, which has been initially shared by Ms.
19 Larson from SMUD. And should the Commission approve the
20 regulation today we look forward to ongoing discussions
21 about successful implementation. And thank you for your
22 time.

23 MS. MURIMI: Thank you.

24 Next we have Ann Santilli followed by Sylvie
25 Ashford.

1 MS. SANTILLI: Good morning, Chair Hochschild and
2 Commissioners. My name is Ann Santilli and I am with the
3 Los Angeles Department of Water and Power.

4 LADWP would like to thank Commissioner McAllister
5 and the CEC staff for working with us on the Load
6 Management Standards. LADWP recognizes and supports the
7 end goals of the Commission's proposed loads management
8 standards, which include minimizing cost, improving
9 reliability, and promoting renewable energy resources. As
10 such, LADWP continuously identifies and implements LADWP-
11 centric solutions to meet these essential end goals
12 considering the City of Los Angeles's unique customer base.

13 LADWP appreciates the revisions in the third 15-
14 day language that allow publicly owned utilities, rate-
15 approving bodies to offer rates or programs or modify
16 requirements after evaluating specified factors such as
17 equity, system reliability, and cost-effectiveness.

18 The implementation of the Load Management
19 Standards will not be easy. Making changes to systems,
20 meters, and other assets can be challenging and costly, as
21 well as launching programs that many will embrace. While
22 LADWP believes there remain technical and clerical concerns
23 within the third 15-day regulations, that could be either
24 addressed in an additional modification to the third 15-day
25 regulations or clarified with the final statement of

1 reasons. We do look forward to continuing to work with the
2 CEC staff on this implementation. Thank you.

3 MS. MURIMI: Thank you.

4 Next we have Sylvie Ashford. Please state and
5 spell your name and you may give your comment.

6 MS. ASHFORD: Good morning. This is Sylvie
7 Ashford, S-Y-L-V-I-E A-S-H-F-O-R-D, speaking on behalf of
8 the National Resources Defense Council. NRDC would like to
9 thank the Commission for their work on the Load Management
10 Standards and encourage speedy adoption of the new
11 requirements. Ensuring that hourly dynamic rates are
12 standardized in the MIDAS database will create a new
13 crucial data infrastructure for demand-flexible devices to
14 automatically optimize their energy use. These technologies
15 may include electric space and water heaters, building
16 appliances, vehicle charging stations and industrial
17 systems down the road.

18 Aligning retail electricity rates with marginal
19 costs has clear environmental benefits, as renewable energy
20 has no fuel costs, and typically the lowest marginal costs.
21 These rates encourage customers to use appliances that will
22 shift electricity consumptions to periods when energy is
23 cleanest.

24 Customers can also save money by opting into
25 these new dynamic rates. And by increasing consumption and

1 avoiding curtailment when energy is cheap and clean, more
2 efficient, renewable energy use will put downward pressure
3 on electricity prices across the board.

4 The proposed standards will also make the grid
5 more reliable by incentivizing consumption during low-
6 demand periods and reducing the likelihood of grid failure
7 at peak times, lessening the need for emergency load
8 shedding by voluntary demand response. This regular
9 demand-smoothing is critical to support existing electric
10 loads and new ones as California pursues Governor Newsom's
11 ambitious targets for across sectors.

12 Again, NRDC thanks the Commission for their work
13 on this critical topic and urges adoption of the Load
14 Management Standards. Along with more efficient clean
15 energy use greater electric demand flexibility will reduce
16 grid costs, save customers money, bolster grid reliability,
17 and spur clean technological innovation. Thank you.

18 MS. MURIMI: Thank you.

19 Next we have Marc Costa. Please unmute on your
20 end, state and spell your name and you may begin.

21 MR. COSTA: Hi this is Marc Costa, M-A-R-C Costa,
22 C-O-S-T-A, Policy Director at the Energy Coalition. I just
23 want to say that we're very supportive of the Load
24 Management Standards and acknowledge staff's cooperation
25 with an EPIC grant that we have where we want to test out

1 this framework for MIDAS. And definitely want to
2 acknowledge that the GitHub repository is accessible in
3 multiple programming language. It's in the public. It's
4 very well done, and we can see it and we can touch it. And
5 that gives us confidence that we definitely support the new
6 Load Management Standards.

7 We also encourage the Commission to participate
8 in the intersecting CPUC regulatory proceedings. So there
9 is an OIR that's -- well, that was held in this voting
10 meeting -- but it should be coming out on customer program
11 frameworks as well as a high DER proceeding, both at the
12 Energy Commission but at the CPUC.

13 And so we really are optimistic that this
14 framework for load management can be operationalized in
15 multiple ways. And so one of those ways is through
16 leveraging existing ratepayer funds on the front of the
17 CPUC to get the technologies in the homes of the people
18 that really need these technologies to test it out.

19 We also see immense opportunities, as EPIC 4 and
20 5 begin to really make a dedicated effort to carve out
21 initiatives for low-income, disadvantaged communities, and
22 underserved communities, to really be the first in line to
23 have these technologies to be able to participate in such
24 markets. And these markets do need to be created. And
25 there's a long way to go in these middle markets where

1 local demand doesn't really hit the transmission system.
2 And fair and adequate compensation for those customers is
3 an ongoing process that we really want to look at, and to
4 understand the locational marginal prices. But any other
5 distribution system planning, either compensation or rates
6 or any other types of markets or aggregations that may be
7 created as a framework through those proceedings. So we
8 really encourage you to participate, make comments in those
9 proceedings.

10 And then lastly, as the Inflation Reduction Act
11 funds are allocated and localized at the state level, we
12 also hope that there's a tremendous effort to
13 operationalize the Load Management Standards through those
14 efforts. So thank you.

15 MS. MURIMI: Thank you.

16 And with that there are no more comments. Chair,
17 I hand the mic back to you.

18 CHAIR HOCHSCHILD: Well my thanks to all the
19 stakeholders. And I do want to say before I turn it over
20 to Commissioner McAllister to kick us off on the discussion
21 I think this is a big day. And it's a day that has been a
22 long time in coming. You know, some of the future we're
23 trying to build is a future that is 100 percent powered by
24 clean energy, where the grid is reliable and the price of
25 power is affordable. And some of the things that we have

1 to do to make that possible are in the category, I would
2 say, of sort of building the plane as we're flying it. And
3 I'm remembering the Demand Response Program that we adopted
4 here in this room on August 10th, and got 250 megawatts
5 signed up within a month to support the grid and help keep
6 the lights on in the September heat event.

7 This is in a different category. This is really
8 a long-term building block, foundational as John White and
9 others have said. And I know it's been a long time coming,
10 I think, at least three years in the making. You've been
11 championing this concept for a long time, Commissioner.
12 And so I'm really excited for the new era this ushers in.

13 I do want to highlight I know there's a lot of
14 stakeholder input and feedback, and it was very iterative.
15 And I just want to compliment you and the team for taking
16 all that feedback and bringing forward into something
17 that's really practical. And with that I'll turn it over
18 to you to lead Commissioner discussion.

19 COMMISSIONER MCALLISTER: Thank you very much,
20 Chair. So I totally agree this is a big day, a long time
21 coming. And load management is not a new idea. It's been
22 around for many, many decades. The utilities in the room
23 and on the phone all know that. And I think the difference
24 is just the tools that we have at our disposal now. And so
25 I'm going to try to resist the temptation to kind of geek

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1 out on this, but I did want to just make some comments, and
2 thank some people.

3 So this, the significance of Load Management
4 Standards is a little bit -- it's hard to overstate on the
5 one hand, because I think we're doing something that no
6 jurisdiction has ever done in terms of really
7 operationalizing in the digital world, load flexibility in
8 a way. Building that platform and making it part of kind
9 of what the public sector, what the state, what the
10 regulatory agencies do that nobody else is going to do, but
11 only that. And so I think we're really putting in place a
12 platform that's going to reduce transaction costs and set a
13 level-playing field and unlock a lot of creativity and
14 innovation. And that's what we need in this sector.

15 We talk about how load needs to shift to off-peak
16 and that's true, but load can do a lot more. It can do a
17 lot more, and more wildly, more deeply, more cheaply, more
18 effectively, more predictably, and more surgically.
19 Particularly when automated, load management can bolster
20 the grid as a reliability resource. The Load Management
21 Standards lays the groundwork for and against it to
22 implement that vision.

23 And I think there's this tripartite of challenges
24 we have that we have to succeed on, reliability certainly
25 is number one, decarbonization and equity, need to manage

1 costs. And so I think over the long term -- in the near
2 term, all three of those are absolutely taking place. In
3 the long term, if you look at sort of where Point B is down
4 the road 20 years from now when we have a completely
5 carbon-free grid Load Management Standards will still be
6 critical. Not so much for decarbonization, because we will
7 have done that but for grid management, reliability, and
8 optimization. So we end up with lower overall sets of
9 issues and problems that we have to deal with if we manage
10 the grid and optimize investment between now and then. And
11 the Load Management Standards are going to help us do that.

12 And the Commission has had this authority since
13 its beginnings. Load management has been a thing for a
14 long time. And historically it's been more limited to
15 industries in sort of a manual kind of approach. I did
16 load management in South America with the industrial sector
17 25 years ago, and it was all phone calls and sort of very
18 manual, but it worked. And today we're lucky to have
19 myriad technologies at our disposal that operate
20 automatically and rapidly enough to really be relevant to
21 the grid at the timescales that we're talking about today
22 in a modern economy.

23 So I'll leave sort of the technical piece there,
24 but I'm just really proud of where we landed. But I'm
25 equally proud of how we've gotten here. And I think we've

1 heard some of that in the comments. I believe that our
2 process is our lifeblood of getting to good results. So
3 we've heard about a few additional details that folks would
4 like to talk through, and we can absolutely do that and
5 look at the FSOR (phonetic) and keep tuning this effort in
6 practice.

7 Want to just really acknowledge CMUA and SMUD and
8 DWP for their iterative comments. I know three rounds of
9 15-day comments creates a fair amount of work for all of
10 you, so I really appreciate your sticking with it. But I
11 also think that the fact that this is something new, it's a
12 new conceptualization, it's a new application of this
13 authority, and it's something that really hasn't been done
14 in this form, that that iteration was necessary to kind of
15 draw out the thinking and get to the result that we have
16 here today. So I think all this effort is going to really
17 be worth it. And it's our way of listening, the formal
18 record. And so I think it's worked in this case.

19 So in some ways -- you know, I mentioned it was
20 really groundbreaking and innovative in some ways. In
21 other ways the rates information is already, in theory at
22 least, it's already public, right? So what we're doing is
23 taking already public information and putting it into a
24 digital, accessible, automatable format. And making it
25 such that it's always up to date at every moment. And so

1 that customers can use it, it can be automated, prices to
2 devices, set and forget. There's a lot of kind of
3 buzzwords that we can use that are true. It's really a
4 tool that's going to, I think, allow a lot of innovation.
5 And we know it's already being used, there are third-party
6 providers that are already using MIDAS and already
7 automating their customers' loads. So it's a very
8 compelling offering I think.

9 So I want to thank all those here to comment,
10 just really for all the thoughtfulness and the continuous
11 engagement. In a lot of ways this is a beginning. We're
12 going to see as Load Management Standards, as the MIDAS
13 gets more use, and as folks sort of figure out how to how
14 to use it optimally as we get more deeply into the SB 49
15 work, the Flexible Demand Appliance Standards, such that
16 fast forward 10-15 years we're going to have literally
17 hundreds of millions of devices out there that have native
18 load flexibility and can be automated around MIDAS.

19 I want to just to thank Delphine -- well I think
20 there's a few others -- but for your comments and you're
21 sort of going a little deeper on why it's important, the
22 Flex Alert from the CAISO. That's, in addition to
23 locational marginal pricing the Flex Alert itself is a
24 signal that can be channeled through MIDAS and go to
25 customers and the individual devices.

1 As well, a greenhouse gas signal. You want to
2 organize your load, you want to shape your load control
3 your load based on just how much carbon content the grid
4 has at any given moment, you can do that. That MIDAS can
5 carry that signal as well. So it really I think it's going
6 to help in many, many different ways.

7 So I want to just thank everyone who commented,
8 Ms. Larson from SMUD, Dan from the PUC, that collaboration
9 with the PUC not only at the staff level, but also with the
10 Commissioner level. I want to just thank Commissioners
11 Houck and Rechtschaffen and President Reynolds for engaging
12 on this as well. I think it has been and will be a really
13 great collaboration going forward.

14 V. John White, thanks a lot for your engagement.
15 And you mentioned data. We're going to have a
16 presentation, which is Item 5, so I think it's related in
17 many ways. So thanks for bringing that up.

18 DWP and NRDC and the Energy Coalition, obviously,
19 really close partners in this and counting on you going
20 forward as well.

21 On the staff level, I just want to acknowledge
22 all the folks who have worked on this, and the list is kind
23 of long. So I just want to make sure, Stefanie, thank you
24 very much for the presentation. And just your stepping in
25 and really taking the bull by the horns here and helping

1 push it forward and getting us to a result, thank you for
2 all of your knowledge and skills.

3 Gavin Situ was the Technical Lead and the cost-
4 effectiveness and a primary author of the staff report. So
5 thanks to you Gavin.

6 Morgan Shepherd, I mentioned he's actually in the
7 audience here, so thanks Morgan. You just worked hard on
8 this and will continue to work hard in the implementation
9 for my office.

10 Heather Bird, the Office Manager, thank you very
11 much Heather. Jennifer Nelson, who is also here I believe,
12 there she is, thanks. She's the Office Manager of the
13 Existing Buildings Unit. And let's see, Corinne Fishman
14 for regular regulatory support. Gabe Taylor is the second
15 Load Management Standards Lead, so he pitched in a lot
16 along the way. Tiffany Mateo was the LMS technical support
17 staff.

18 Karen Herter, who was the first Load Management
19 Standards Lead is not with the Commission anymore. I know
20 she's listening, so thank you, Karen. Drafted the first
21 regulatory language and worked with stakeholders and really
22 kind of got the snowball rolling and growing and did the
23 initial MIDAS design as well. So a big contributor to the
24 report, the final staff report, and just really the glue
25 that that kept this thing together for it's a sort of

1 initial conceptualization and pushed it forward. So
2 thanks, Karen.

3 I mentioned David Cuffee. He was the lead
4 programmer for MIDAS, so just a really core resource for
5 this whole effort.

6 And on legal, Kirk Oliver, who is here. Thanks
7 Kirk, for all of your work on the language and interaction
8 with stakeholders. And really, your counsel throughout
9 this process has been really great.

10 Michael Murza who was also assigned staff for the
11 Chief Counsel's Office, and worked on the regulatory
12 language, is now absconded to the Department of Energy. So
13 we miss you, Michael, but thanks for your pitching in here.

14 And I had mentioned Commissioner Houck, because
15 she was also Chief Counsel when we were working through
16 some initial issues here. So thanks, Darcie, for all of
17 your effort at the beginning.

18 And then Mike Sokol, the Deputy for the
19 Efficiency Division is right in the audience here. Thanks,
20 Mike, for just running herd on many issues alongside this.
21 And on this, particularly, we really appreciate your
22 leadership.

23 So I think that's all, those are my comments.
24 Thanks for indulging me. But this is the beginning, but I
25 think it really portends great things, and it's going to

1 enable us. If we think back to some of the challenges
2 we've had with reliability in peak summer days, now
3 obviously effectiveness sort of isn't limited to peak
4 summer days. But I think if we had had this ecosystem in
5 place a couple months ago we would have been able to
6 mobilize in an automated way, and kind of just behind the
7 curtain considerable resources. And it would have relieved
8 pressure on the grid just as a matter of course.

9 And so I think this is another tool in our
10 toolbox, a really important one, to get the load shaping
11 that we want sort of systematically over time. And that's
12 a great optimization tool, or sort of a great foundational
13 tool for creating the grid that we want. That we need.
14 That we're going to need as our supplies modulates by the
15 rhythms of nature, solar and wind, yes we're going to put
16 in a lot of storage. Yes, we're going to look at different
17 kinds of firm resources. But this allows our demand to
18 really do that handshake at the same rhythms. And so I
19 think it's a powerful resource in that way and really
20 appropriate for the future that we're trying to create.

21 So thanks again to everyone, particularly the
22 staff.

23 CHAIR HOCHSCHILD: Thank you.

24 Let's go to Commissioner discussions starting
25 with Commissioner Vaccaro.

1 COMMISSIONER VACCARO: Thank you, Chair
2 Hochschild. So first of all I just want to recognize the
3 tremendous leadership of Commissioner McAllister for this
4 effort, and the work of the staff.

5 I think this meeting is kind of interesting.
6 There's so much praise and support and discussion of
7 cooperation and collaboration, but it's been a hard three
8 years, right? It's very, very technical work, a lot of
9 analytical rigor. And as was mentioned you got to the
10 what, third 15-day language revisions to really be able to
11 work some key issues with SMUD and LADWP. I had some
12 opportunity to listen to some of the POU concerns. And I
13 was very optimistic and I shared this: that with your
14 leadership, with your ear, and with the cooperation of
15 staff that I felt that there was going to be amicable
16 resolution. And really, it's a testament to you, staff,
17 and I think the stakeholders, for really wanting to engage
18 in this process. And for everybody really having the same
19 value set and the same objectives in this space.

20 I did have one question. I feel like I'm
21 understanding, I've read a lot of the documentation, I've
22 had briefings, I feel like I understand what we're looking
23 to achieve here. The place where I just would love to hear
24 you, Commissioner McAllister, or staff, explain a bit as
25 what does this truly mean on the customer side? Like, how

1 does a customer reap the benefits of this? And what
2 actions does a customer need to take? When does the
3 customer need to engage in in readiness? Just a sketch of
4 that I think would be really helpful, just to kind of
5 really make this live in a different way.

6 COMMISSIONER MCALLISTER: So I would invite staff
7 to chime in here as well. But the way we ended up, I think
8 the result that we have now is actually quite flexible.
9 And so the impact on the customer will really vary by
10 utility and by kind of some of the processes that now begin
11 to figure out how this translates into specific offerings
12 for utilities. One of the issues that we really worked
13 hard to get through with the POU's particularly -- and I
14 just want to thank CMU and SMUD and DWP for bringing a lot
15 of creativity to this conversation -- is how much
16 flexibility to grant them in terms of allowing them to
17 approach their customers with programs versus sort of just
18 a straight tariff-based approach.

19 And so SMUD, for example, already has a lot of
20 programs in place that functionally get to a similar place,
21 but are kind of expressing the grid needs in through a
22 program structure. That generally it would include a rate,
23 but would also include some additional communications and
24 sort of hand holding with the customer. So that's okay,
25 they can write that into their plan. And that conforms

1 with the process that we've laid out.

2 So with industrial and commercial customers, they
3 may just be a straight more kind of just a straight time of
4 use or multiple time of use kind of rate, time-specific
5 rate, that has more teeth to it maybe. And is even more
6 expensive during on peak and less expensive off peak than
7 maybe current rate structures are. That allows them to
8 then work with a third party or use their own staff to put
9 in place the automation that can take that signal and act
10 on it that they're building, so which is more of a kind of
11 traditional load management structure where it's like rate
12 goes in and it gets responded to.

13 And I think pointing out maybe just in general
14 it's more than a qualitative difference. We think of
15 demand response is like, "Oh my gosh, we need capacity,
16 drop load," right? And so we've got this peak summer day,
17 we need load. This is a more kind of systematic or
18 systemic approach. So with time we'll get to a place where
19 it's not just the current rates are in MIDAS but the future
20 rates are in MIDAS. And so that a customer can say, "Okay,
21 well, tomorrow, I know the rate is going to be different.
22 I'm going to pre-cool my building -- V. John White brought
23 that up -- and I'm going to therefore I'm going to flatten
24 my load shape or I'm going to shift my load shape in a way
25 that really does respond to the grid and have some monetary

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1 upside. And I'm just going to program that right in."

2 So the most optimistic or the most optimal
3 outcome I think would be it actually doesn't have much
4 effect on the customer, because it's pretty much automated
5 behind the scenes once it's kind of set up. We're working
6 right now on load management or flexible demand appliance
7 standards for pool pump controls for example. Staff is
8 working on that staff report.

9 So the pool pump replacement vendor would come in
10 or the pool guy would come in and replace the controls in
11 the pump maybe, and leave it in a place where it is
12 operating to respond to load management signal. And so
13 that major load across the state, that happens a few
14 thousand, a million times, and then you're talking about
15 real load. So it'll take a little time to sort of
16 permeate, but I think the customer impact will be behind
17 the scenes and not that evident to them in many cases, or
18 it'll be managed by a third party in other cases, or it'll
19 be through utility program and other cases.

20 So I don't know, probably I've said enough there.
21 But anyway, it's a great question, because I mean I think
22 time will kind of tell exactly, right? But I think that's
23 the idea.

24 CHAIR HOCHSCHILD: Thank you.

25 Vice Chair Gunda?

1 VICE CHAIR GUNDA: Yeah. Thank you, Chair. I'll
2 second the comments that Commissioner McAllister made. And
3 Commissioner Vaccaro thank you for your comments, I think
4 covered most of most of what I was going to say.

5 But I just wanted to reiterate thanks to
6 Commissioner McAllister. I think the public process is at
7 the heart of the Commission's work. And you really
8 optimize that, as you do, and the Efficiency Division
9 through the different standards work you all do. So I just
10 wanted to say thank you for the incredible work and the
11 thoughtfulness and navigating the recommendations that we
12 received and making sure we got to a reasonable place in
13 the amendments that we suggested.

14 From my vantage point I think I share the same
15 vision, it helps with SB 100, reliability and equity. So
16 I look forward to the continuing work.

17 I just want to make a couple of thanks.
18 Stephanie, thank you for the time you've taken to help
19 brief our office and bring us up to speed. And Mike Sokol
20 and Jen at the top really helping guide the Division, so
21 thank you so much.

22 CHAIR HOCHSCHILD: Commissioner Monahan?

23 COMMISSIONER MONAHAN: Well we all have to say
24 something, because these are truly transformational. And I
25 was really struck by something V. John White from CEERT

1 said -- he's no longer here, but I'm going to quote him --
2 that these standards are reinventing demand response.

3 And as somebody who's been in this energy space a
4 long time and has felt frustrated by the slowness of
5 progress in terms of demand response -- I'm sure
6 Commissioner McAllister, who is much more steeped in this
7 feels deeper frustration -- but relying on individual
8 actions over and over again, individual decisions, with a
9 complicated set of electricity rates that most people don't
10 understand and that change frequently enough that it's very
11 confusing. And to take that out of the hands of individual
12 confused consumers, of which I count myself, and to put it
13 into an automated system that is user-friendly and saves
14 you money, it's like a dream come true in this world. In
15 this world of energy, this nerdy world of energy.

16 And I think, as others have said, Commissioner
17 McAllister deserves a lot of praise. I would call him the
18 father of Load Management Standards, which is I think
19 worthy of a lot of recognition, not just here in California
20 but I hope it migrates.

21 And this is particularly important as we start
22 electrifying more and more. We're facing higher rates in
23 the state. We're electrifying vehicles. We're
24 electrifying heat. We're electrifying our cooking. And
25 these are all good for greenhouse gases, but if they're

1 done wrong they're bad for the grid. And as the Chair says
2 we need all these devices that we are plugging in to be
3 good citizens of the grid. I want to run my vehicle on
4 sunshine, I think a lot of people do. And saving money
5 while you do it is going to be a win for consumers and a
6 win for the environment.

7 So I think I also want to thank our fellow energy
8 agencies for their partnership. CAISO and Delphine, the
9 CPUC is going to be critical, especially in the rate
10 setting department of this, in order to ensure that we have
11 the right rates, the right structures to be able to
12 capitalize on these Load Management Standards most
13 effectively.

14 So thanks to Stefanie Wayland and the entire
15 Efficiency team. I think this took a lot of vision and
16 wherewithal, many, many years of hard work to develop such
17 transformational standards.

18 CHAIR HOCHSCHILD: Thank you.

19 And with that, I would like to turn it over to
20 Commissioner McAllister, if you'd like to move Item 2.

21 COMMISSIONER MCALLISTER: All right.

22 MR. QAQUNDAH: Chair?

23 CHAIR HOCHSCHILD: What?

24 COMMISSIONER MCALLISTER: Oh?

25 MR. QAQUNDAH: Sorry, Chair. If I may?

1 CHAIR HOCHSCHILD: Go ahead.

2 COMMISSIONER MCALLISTER: Go ahead, Jimmy.

3 MR. QAQUNDAH: Thank you. I just wanted to
4 clarify the record, because I know there was a question.
5 The resolution that's being voted on today is actually
6 included in the backup materials and correspondingly posted
7 to the website.

8 MR. PETTY: Sorry, this is the court reporter.
9 Who is speaking right now?

10 MR. QAQUNDAH: I'm sorry, Jimmy Qaqundah,
11 Assistant Chief Counsel in the Chief Counsel's Office.

12 So the resolution is included. What's being
13 voted on is the third 15-day language, which was posted to
14 the LMS Rulemaking Docket on September 12th, along with
15 notice that it would be considered at today's meeting.

16 CHAIR HOCHSCHILD: Great. Thank you, Jimmy.
17 Okay, Commissioner.

18 COMMISSIONER MCALLISTER: Okay. Well, with great
19 pleasure and thanks to all the staff and everyone involved,
20 I move Item 2.

21 CHAIR HOCHSCHILD: Vice Chair, would you like to
22 second?

23 VICE CHAIR GUNDA: Second Item 2.

24 CHAIR HOCHSCHILD: All right. All in favor say
25 aye.

1 Commissioner McAllister?

2 COMMISSIONER MCALLISTER: Aye.

3 CHAIR HOCHSCHILD: Vice Chair Gunda?

4 VICE CHAIR GUNDA: Aye.

5 CHAIR HOCHSCHILD: Commissioner Vaccaro?

6 COMMISSIONER VACCARO: Aye.

7 CHAIR HOCHSCHILD: Commissioner Monahan?

8 COMMISSIONER MONAHAN: Aye.

9 CHAIR HOCHSCHILD: And I vote aye as well.

10 Congratulations to the whole team.

11 As we mentioned earlier Item 3 is going to be

12 pulled from today's agenda. We'll take that up on our

13 Commission meeting on October 24th.

14 We'll turn now to Item 4, Information Item on

15 State Response to the September 22 Heat Wave. Welcome to

16 David Erne.

17 MR. ERNE: Good morning Chair, Vice Chair and

18 Commissioners, I'm David Erne. I'm the Deputy Director of

19 the Energy Assessments Division. I'm going to give a

20 high-level overview of the heat event that we had in early

21 September and give some perspective on that. And just to

22 say that we're in the early phases of doing analysis of

23 this event and we'll have more information that we're

24 providing later on and I'll touch on that at the end as

25 well. Next slide.

1 I'm going to quickly go over this first slide,
2 which we provided in our May reliability workshop. And I
3 won't cover it in detail, but I want to touch on a few
4 important points. The important points are that the issues
5 facing the grid are compounding.

6 Let's start with our planning. So the planning
7 is based on historic conditions. And as we have seen the
8 years, recent years we do not have the historic conditions
9 that we used to have, things are changing rapidly. And so
10 that does affect in terms of how we plan for the grid and
11 how we move things forward.

12 And that's a result of a number of issues that
13 we're seeing, those issues being extreme heat, we've had
14 multiple years of that. Extreme drought, multiple years of
15 that.

16 We have wildfires that are affecting the grid,
17 like last year when the Bootleg fire resulted in 3,000
18 megawatts not being available for imports because of that
19 fire.

20 And then supply chain issues, which we saw not
21 only during COVID, but we're seeing this year as well. And
22 those supply chain issues really impact the types of
23 technologies that we are wanting to procure for our grid to
24 keep it safe and secure, like solar storage, etcetera. So
25 we have supply chain issues that we have to deal with.

1 And of course, inflation. Inflation has affected
2 everything, but it also affects our clean energy projects
3 and those projects getting more and more expensive.

4 We have a number of events that are affecting and
5 compounding our reliability. States taken a number of
6 actions since the rolling outages that we had in 2020.
7 CPUC made an unprecedented procurement requirement last
8 year. And we also created a series of available resources
9 that we call our contingency resources that we can bring on
10 during emergencies that are above and beyond the resources
11 that are called for in a resource adequacy. And those
12 we've been able to bring to about 2,000 up to this year.
13 So it's a pretty substantial amount of 2,000 megawatts, a
14 pretty substantial amount of contingencies that we have
15 available to us.

16 We're also reassessing our planning reserve
17 margin. And as a result of -- and I'll talk about this in a
18 second -- as a result of analysis that we've done earlier
19 this year it drove the Governor to want to propose \$5.5
20 billion for a strategic reserve. And I'll talk about that
21 in a little bit more detail as well in a second. So next
22 slide. Oh, I think we skipped a slide there, or several
23 slides actually. All right. Well, I'll continue there.
24 There it is.

25 So earlier this year the CEC, CPUC, and CalISO

1 looked at what could be the worst-case conditions that we
2 might experience in 2022. And we put those into three
3 separate buckets.

4 The first one is the inherent lag we have between
5 the demand forecasts that we generate the PUC's requirement
6 for procurement, and then how demand might change during
7 the time where those resources are being procured. So the
8 demand change between last year and this year for this
9 summer of upwards of about 1700 megawatts, a greater demand
10 than was anticipated. And part of that is as a result of
11 us thinking more about climate change, but there are other
12 factors that affected that as well.

13 In addition, I mentioned that we predicted that
14 we would have delays in projects being approved or getting
15 online. We estimate that about 600 megawatts. And then as
16 I mentioned before, with things like wildfires and extreme
17 weather risks we estimate probably 4,000 to 5,000
18 additional megawatts that might be needed.

19 If you added all of these up together we figured
20 probably about 7,000 additional megawatts could be needed
21 if we have a coincident event. We have not. We've been
22 fortunate not to have coincident events so far, been very
23 fortunate. But if we did, we need upwards of 7,000. As I
24 mentioned we had about 2,000 megawatts in contingencies.
25 So that left us about 5,000 megawatts that really would be

1 needed in the event of a bad situation. You go to the next
2 slide.

3 That is what was the basis for the strategic
4 reserve. So through AB 205 a strategic reserve was
5 established, established at \$3.4 billion, and that
6 consisted of three programs. The first one is a Department
7 of Water resources program, the Strategic Reliability
8 Reserve Fund. That \$2.4 billion is meant to procure
9 additional emergency generators, procure imports, and also
10 be able to take advantage of once-through cooling plants if
11 necessary, moving forward.

12 We have two programs being run by CEC, the Demand
13 Side Grid Support Program, which is \$295 million. That was
14 actually kicked off in very late in August. So they came
15 through, our Renewables Division came through that very
16 quickly, and got that program up and running for September.
17 And I'll talk about that in a minute.

18 And we also had the Distributed Electricity
19 Backups -- oh I'm sorry, the Demand Side Grid Support
20 Program is like CPUC's Emergency Load Reduction program.
21 *** It reimburses load reduction.

22 And then the last one is Distributed Electricity
23 Backup Assets, which is really intended to convert diesel
24 backup generators to clean energy backup generation,
25 essentially. So there'll be an incentive program that will

1 be rolled out next year.

2 In addition to that SB 46, which covered Diablo
3 Canyon and the potential need for Diablo Canyon,
4 established a \$1.4 billion fund that could support a loan
5 to preserve the option to extend Diablo Canyon.

6 So a number of activities took place associated
7 with our budgets this year that prepared us. Next slide.

8 Let me talk a little bit about this heatwave that
9 we had. So from August 31st to September 9th we had
10 extensive heat in all over California, but also across the
11 west like we saw in 2020. However, if you look at the
12 seven-day rolling average of temperatures you can see that
13 the extremes that we saw in 2022 were quite high compared
14 to previous years. And you might say, "Well, we had a
15 substantial demand during that time." But I see points on
16 this graph that are higher than that in 2020.

17 Now I'll point out specifically the little blue
18 dot above 2022, which is actually representative of a day
19 in September in 2020, where we had higher temperatures
20 across California than we had this year. A big difference:
21 that was a Sunday, we had COVID, it was only a single event
22 as opposed to multiple days, and we know that when there
23 are multiple days heat buildup causes additional concerns.
24 So our 2022 was really a pretty substantial event that
25 occurred for the state. And there was a lot of action that

1 was taken to try to address that. So let's go to the next
2 slide.

3 Before I get into the actions I do want to talk
4 specifically about September 6th, which was our worst day
5 and the one that got the most press. So we keep clicking
6 through to a couple of clicks there. Let's talk a little
7 bit about the demand. So the gold band is what our demand
8 forecast was, that's an average year. And you can see the
9 green is actually what our demand actually was. Okay, much
10 greater than our average, pretty substantial. You can
11 click through again. We saw a high of 50,000 megawatts,
12 which is a new record for California again.

13 And we saw some activities that were taken that
14 were unprecedented.

15 CHAIR HOCHSCHILD: I'm sorry, David, if I can
16 just -- that does not include behind the meter, correct?

17 MR. ERNE: It does not include behind the meter.

18 CHAIR HOCHSCHILD: So what is our estimate when
19 you add that in of what the actual was?

20 MR. ERNE: The trajectory was about 53,000
21 megawatts is what we were heading up to. But that is
22 overall demand that we would see, not including what would
23 be accounted for by demand behind the meter, so we're still
24 evaluating that.

25 Cal OES called a wireless emergency alert. That

1 was at about 5:45 and you can see what happened during that
2 time period -- so you can barely see the green shading --
3 between 4:00 and 9:00 was our biggest concern. And you can
4 see that starting in 4:00 we started having demand
5 reduction occur because of Flex Alerts and other activities
6 that CalISO took. But you can see that huge drop after the
7 wireless emergency alert, which meant 27 million
8 Californians heard the alert and took action; pretty
9 impressive. So when we talk about what Californians will
10 do to help support grid reliability there's perfect proof
11 right there. Next, you can click through some more.

12 I do want to compare this to generation just to
13 make that point again about why this happens, which is
14 renewables, particularly solar which is in the kind of
15 brown line, goes down rapidly which is what causes our
16 problem. But we had wind come up a little bit, and we had
17 batteries. Now batteries actually had some really good
18 performance, and I'll talk about that in just a second.
19 Next slide.

20 As bad as that day was, we made it through. It
21 was a nail biter. And by the way I should say that it
22 wasn't just an issue for CalISO territory this is an issue
23 across the state, other territories were calling emergency
24 alerts as well. We had very favorable conditions, so it
25 could have been worse.

1 We had very low outages for our generation fleet.

2 We had fires in the state that CAL FIRE was
3 working very hard to prevent those fires from encroaching
4 upon transmission and generation resources, so it -- excuse
5 me -- protected those resources.

6 We had very strong imports, 1,000 or more over
7 what we would normally see as a max. And so it was a
8 pretty valuable input that day. And that's important
9 because we did have west-wide heat. And so usually when we
10 have west-wide heat we're a little bit concerned about
11 that.

12 And we had very strong battery performance. So I
13 like this color chart, you don't need to dig into it just
14 focus on the red and the green. Red is when batteries
15 charge, green is when they discharge. They're doing
16 exactly what we want them to, charging when solar is the
17 greatest; discharging when we need them during the net
18 peak, pretty substantial impact from energy storage. Next
19 slide.

20 We made it through that day through a lot of
21 actions from a lot of people. I mentioned customers
22 overall took action to make sure that they reduced their
23 load, that was pretty substantial. But there were a lot of
24 other actions that were taken.

25 So on August 31st the governor proclaimed a State

1 of Emergency that allowed a number of actions to be taken
2 and resources to be available that would not have normally
3 been available, some of which were the strategic reserve.
4 So although the strategic reserve was called into play,
5 basically the budget came through in the summer, got those
6 programs up and running, DWR had additional imports they
7 procured, they had additional generation, emergency
8 generation they had to get online. The Renewable
9 Division's Demand Side Grid Support Program had over 300
10 megawatts of resources signed up and operating during that
11 week.

12 So the strategic reserve just in its first few
13 months already generated 1,600 megawatts to support the
14 grid, pretty substantial value for us for this this year.
15 And as you can see we were very close to the edge, so every
16 megawatt counted and that was a pretty substantial impact.
17 As I mentioned before, we had our contingencies: Flex
18 Alert, Emergency Load Reduction Program, and CAISO had the
19 ability through the Emergency Proclamation to increase some
20 generation limits, and we had transfers from other
21 balancing authorities; again, all providing value to the
22 grid and keeping us from going over.

23 Another one that I want to point out is even
24 though DWR normally goes in each one of these events and
25 tries to maximize their hydro and reduce their pumping they

1 took extra time to look for more opportunities and actually
2 be able to pony up more megawatts of hydro generation
3 during the 4:00 to 9:00 peak during the 6th as well as
4 reduce their pumping even further.

5 So I do say that I do notice that we are -- I do
6 mention here that we are assessing these factors, we'll
7 have more input on this. And we have several reports due
8 to the Legislature later this year and early next year that
9 will give a greater summary. And we'll incorporate more
10 also in the IEPR this year. With that I'll close and I'm
11 open for any questions you may have.

12 CHAIR HOCHSCHILD: Well, thank you so much. And
13 let me just say again on behalf of all of us on the
14 Commission we want to thank you for your professionalism
15 and your whole team under the leadership of the Vice Chair.
16 The lights did stay on.

17 I do want to point out unfortunately there are
18 people out there who are rooting for us to fail and for the
19 lights to go out. And I think you don't have to look too
20 hard for some of the comments that were made over this past
21 summer, and it was really historic, that we were able to
22 come together through this unprecedented heat storm. And
23 by the way, I really think "heat storm" is the right
24 terminology to use, because these are incidents that have
25 the effect of a natural disaster. And we need to treat it

1 that way and talk about it that way.

2 So I'm just incredibly proud of the team. I know
3 all of my colleagues joined that sentiment and thank you
4 for your professionalism. And with that let's open up to
5 discussion. I don't think we're taking public comment,
6 because this is an information item. But Vice Chair Gunda,
7 would you start us off?

8 VICE CHAIR GUNDA: Yeah. Thank you, Chair.

9 So first of all, David, thank you for the
10 excellent summary of the whole event. I just wanted to
11 begin by kind of noting the importance of people coming
12 together during times of crisis like this.

13 We would not have gotten through September
14 without a rolling outage, without the kind of mobilization
15 that we saw across all stakeholders coming together with
16 the singular intent to make sure that the lights don't go
17 off. So I think the state agencies have played a very
18 important role in bringing people together, the Governor's
19 Office was instrumental and there's leadership at the
20 Governor's Office. But also many of you who reached out to
21 us offering solutions, offering to help, and get us through
22 this September.

23 A couple of high-level points I wanted to note in
24 terms of the enormity that David just mentioned in his
25 presentation. We were on trajectory to hit about 53,000

1 megawatts in a peak. We ultimately settled on about
2 52,000, right? So that's a 7 to 8,000-megawatt deviation
3 of what we could have had in terms of demand in an average
4 weather condition. So when we're talking about 7 to 8,000
5 megawatts, that is two LADWPs nearly added to the CAISO
6 system. So the enormity of this could not be understated
7 and the climate crisis could not be understated.

8 We could always as a state family, do better in
9 terms of planning. We could do better in terms of
10 procurement, we could take a lot of actions to make sure we
11 are planning for the climate crisis. But these types of
12 events are so outside the bounds of what we can reasonably
13 expect we just have to recognize the extraordinary nature
14 of that. And really commend the independent staff who has
15 worked on it, but also the stakeholders who really carried
16 us through that event.

17 Specifically, in at the CEC we have a number of
18 staff members that worked on it. And I think this is a
19 moment I'm going to just talk about both the joy of public
20 service, but the pain of public service. Most of our staff
21 are here, oftentimes not making as much as they could in
22 private industry with the sole purpose of feeling empowered
23 to serve the public. And they do it day in and day out. I
24 know we all have flaws. We could do better. But I just
25 want to recognize the CEC family and the team that has done

1 such extraordinary work during this time.

2 And it was just not CEC, I mean, it starts at the
3 top. When we talk about CEC it starts at the top with the
4 Executive Director Drew Bohan, who is standing in the back.
5 Oftentimes he does not take the limelight. He just stays
6 back and let people get the credit. I just want to say,
7 Drew, from the bottom of my heart thank you for carrying
8 the Commission during that week. It was extraordinary what
9 you were able to do.

10 Also independently the Divisions. We have the
11 Assessments Division, Aleecia and David and all the
12 Division who worked so hard in data-gathering situational
13 awareness, all the actions we've taken.

14 The Renewables Division, Deana, I can't -- I
15 don't understand how you work, you and Ashley, for
16 launching the program, the Demand Side Grid Support Program
17 in less than two months and getting 300 megawatts of
18 support to get us through that, so thank you.

19 And Elizabeth, to you and your team. STEP
20 Division is kind of invisible to this, but the work that
21 you do is extraordinary.

22 And all of the Divisions don't do work in a
23 vacuum without the support of the Commissioners. So want
24 to just extend my thanks to Commissioner Vaccaro for her
25 leadership on STEP. For Commissioner Monahan on the

1 vehicle side, which becomes an important part.
2 Commissioner McAllister for the Building side, so we all
3 work on it together, individually, with our staff. I just
4 want to say big thank you.

5 And a really big thank you to the Chair. For
6 those of you who see him as kind of a bold visionary, you
7 should see him getting there to clean the tables if needed
8 on days like this. So thank you, Chair, for your work.

9 I also want to thank CCO. You guys have worked
10 all the way from April getting -- you know, landing the
11 extraordinary trailer bill (phonetic) language that gave us
12 the money and the authority to do the work we're doing
13 right now. And all the way. We had the Diablo
14 conversation and then we had the heatwave to get through.
15 And you're not just supporting reliability, but ten other
16 things for other Commissioners. So thank you so much Linda
17 and Lisa specifically for your thoughtful approach in
18 helping us get through.

19 I want to just add Damien in the Admin Division,
20 who was extraordinary. Lindsay and her teams in the Comms.
21 As an engineer I never really liked or I appreciated what
22 Comms brings to the table. Thank you. We would live in a
23 panic if you didn't kind of communicate it properly, so
24 thank you.

25 And last, but not the least, our office. Ben

1 Finkelor, Liz Gill, as well as Erik Lyon, who put hours
2 behind the scenes. I mean, this is not -- I mean I'm kind
3 of feeling a little emotional, because we don't -- our
4 staff don't get paid enough to do this work. They, at the
5 end of the day when you count the amount of hours they work
6 to serve the public of California they probably make
7 minimum wage, some of them. So thank you for showing up
8 and working as hard as you do and putting your hearts out.

9 I also want to just note a big thanks to CAISO.
10 So after coming out of 2020 we had a lot of issues that
11 were raised. CAISO has an extraordinary team. I mean, they
12 get a lot of things that they get criticism for that they
13 have to work through. And some of them are legitimate, but
14 just the extraordinary amount of professionalism.
15 Delphine, Mark Rothleder and Elliot, great work there.

16 DWR was exceptional during this crisis. They
17 were able to set up the strategic reserves quickly,
18 quickly.

19 CPUC, same thing as our Chair. President
20 Reynolds is somebody who will just jump in, roll up her
21 sleeves and work. If it's like midnight making calls she
22 will do that and so I just want to thank her, Commissioner
23 Rechtschaffen, but also special thanks to Pete Skala, whose
24 work is extraordinary and behind the scenes, and Leuwam
25 Tesfai, who is the new Director.

1 Also want to just call out a special thanks to
2 GO. It's not always visible what GO does, the Governor's
3 Office, does. I just want to call out our former
4 Commissioner Douglas, her extraordinary work in bringing
5 all of us together there. But Christine, who's the Deputy
6 Secretary, I just wanted to say thanks all around, it's
7 important.

8 I'm going to make a couple of important points.
9 We're not out of this, right? I mean, as the Chair
10 mentioned -- I mean, one of the meetings that I was with
11 the Governor -- I don't think I would ever share this
12 publicly, but I want to -- is after we came out of the 2020
13 rolling outages we were meeting with him and talking about
14 what happened and how do we make sure this doesn't happen.
15 And I remember I was staff at that point, not yet
16 appointed. And his call that what we do in California
17 saves lives, not only in California, but in the country and
18 the world.

19 Like the climate crisis is real. For us there is
20 a million reasons why to back off from electrification at
21 this time. It seems like a prudent thing to do. Maybe we
22 shouldn't electrify. Maybe we should do other things to
23 slow down on our climate actions, because the lights might
24 go off. From my vantage point, a number of us in this
25 room, we agree this is the time to double down, triple

1 down, to make sure we address climate change. And this is
2 not going to stop. It's going to move forward. And we
3 need to come together to make this happen.

4 And in terms of the collective action special
5 thanks to all the POUs, the CCAs who showed up and helped
6 us through this event, the IOUs, as well as some of the
7 people with large loads, like the data centers, water
8 agencies and such. We could not have gotten through this
9 without all of you. And thank you so much for helping us
10 get through this.

11 The one last point I want to make sure is the
12 sobering point of all this. When we tried to keep the
13 lights on one of the things we did is turn on diesel backup
14 generators everywhere we could in the state. And most of
15 those backup generators typically are in disadvantaged
16 communities. And that's what happens, right? Our actions
17 are then borne by disadvantaged communities. And this is
18 where equity comes into place. And we need to make sure we
19 act collectively to protect our communities who are in the
20 frontlines. And I just make this both thank you to
21 everybody who showed up, but a plea to continue to work
22 together to solve this climate crisis and keep our world
23 available for our future generations. So with that thank
24 you, gratitude.

25 CHAIR HOCHSCHILD: You know, Vice Chair, if I

1 could just build on your comments? If we could just have a
2 round of applause for all the staff who worked so hard to
3 keep the lights on in '22. And just if I can, thank you
4 for going through that list of comprehensively. Your point
5 is so well taken.

6 I just want to emphasize there are 195 countries
7 in the world. Our economy is bigger than all but 4 of
8 those, okay? We get a lot of attention for what we're
9 doing on climate. We're really leading the world in many
10 of these arenas, from energy efficiency to energy storage,
11 to electric vehicles, and so forth. And there are people
12 who are rooting for our failure, and are going to use an
13 outage in California as a reason to undermine the climate
14 policy that we need. And so the stakes are incredibly
15 high. I think that's why all of us are here. And so this
16 was an incredible challenge to get through that period and
17 I couldn't be prouder of you and the whole team.

18 And it just ties together everyone's work.
19 Commission Vaccaro going forward on all the things that
20 we're going to do for offshore wind, that is going to be
21 good for the grid. Offshore wind is peaking during the
22 time of day and the time of year when the grid needs it.
23 All the energy efficiency work that's the bedrock of our
24 work at the Energy Commission, we would be in a much worse
25 position without the Efficiency Standards. And then going

1 forward, getting smart on demand. And then thinking about
2 electric vehicles, how they integrate the vehicle to grid,
3 it just ties together. And then some of the storage stuff
4 that we're going to be voting on later today. So this is
5 an all-hands-on-deck moment. The stakes are incredibly
6 high. And I just couldn't be proud of the team, so thank
7 you.

8 Let's go to other Commissioners wishing to
9 comment, Commissioner Vaccaro?

10 COMMISSIONER VACCARO: Yeah. Thank you.
11 Everything that you said, Chair and Vice Chair, so well
12 put. And I would like to associate myself with your
13 feedback, and certainly not repeat it but really just sort
14 of amplify the messaging and the thanks.

15 I wanted to ask you though, David, first of all
16 this is a great presentation. I think every time I get the
17 opportunity to be educated about what happened it makes me
18 feel better as I have to explain to others, right? And a
19 lot of what I do is rely on the information I received from
20 staff to be able to really understand it and articulate it.
21 So you did a tremendous job today. I think you had
22 mentioned that there are a few forthcoming reports to the
23 Legislature. I just wondering if you could touch on the
24 timing of those and then if we can expect to see you back
25 here again. You just sort of updating us and letting us

85

1 know what you're sharing with legislative staff and
2 legislators.

3 MR. ERNE: Yeah, so the two most near-term ones
4 are a reliability report that is required by SB 846 that is
5 due December 15th of this year to Legislature. And there's
6 another one, an update of summer reliability and the plan
7 forward of reliability for the next ten years. It's due in
8 January 31st of next year. So there will probably be some
9 overlap between those two reports, but those are the two
10 most near-term reports that we need to generate.

11 COMMISSIONER VACCARO: Thank you and I look
12 forward to seeing you here again with a few more
13 informational items on this topic. I appreciate it.

14 CHAIR HOCHSCHILD: Commissioner Monahan?

15 COMMISSIONER MONAHAN: Well, I too just want to
16 build on what the Vice Chair, Chair, and Commissioner
17 Vaccaro have said in terms of just being so honored to work
18 at the Energy Commission at this time of crisis. And to
19 witness I think from somewhat afar in terms of this not
20 being my lead area, but just to see the commitment of the
21 staff and Vice Chair Gunda and Chair Hochschild to ensure
22 that the lights stay on.

23 And as Vice Chair indicated this is a public
24 service, people are working nights and weekends and very
25 stressed. And I just want to acknowledge that and thank

1 everyone for that commitment. So it really is, as I said,
2 just I feel very deeply proud of what you and the team were
3 able to accomplish. And our job is not over.

4 So it is I think somewhat disheartening for all
5 of us to think that this is going to be for the next
6 several years at least. We're going to need to see you and
7 hear more of these presentations. And I think this is a
8 great opportunity I think for us, especially as we start
9 managing more and more public dollars, to really spend time
10 on the subjects that really matter and help define how we
11 then allocate those dollars.

12 So I really appreciate actually Drew Bohan, our
13 Executive Director, for having some more space for these
14 kinds of conversations which I think are really critical to
15 all of us as we think through the connective tissue between
16 transportation and buildings and reliability and siting.
17 It's clearer and clearer that we need to break down the
18 barriers between these and become one and that takes
19 communication like this. So thank you.

20 Let's go to Commissioner McCallister. Thank you.

21 COMMISSIONER MCCALLISTER: Great, so awesome
22 comments. I want to just again sort of pile on the thanks
23 to Vice Chair Gunda, I know how hard you worked on this,
24 and also to Chair Hochschild.

25 Just the electrons really don't care what's

1 happening out there. And so I just think we kind of have to
2 operate on their timeframe, which is a very quick one. And
3 the system just requires cold, hard objectivity to make
4 sure that the conditions for making it function properly
5 are in place. And so just that is a many, many hands-on-
6 deck effort. So I just want to acknowledge the staff and
7 our counterparts in the other agencies.

8 And I'll talk about this a little bit in my
9 comments, but I just got back from Australia right around
10 24 hours ago, I guess. And so not exactly clear what time
11 zone I'm in. But we are not the only ones facing these
12 kinds of issues as we really push the envelope on the
13 transition, and really doubling down on renewables and
14 making that our future and just putting all-hands-on-deck
15 to get there. Just we have 100 percent commitment. And
16 that looks different in other places, and Australia is
17 facing similar analogous, but not identical challenges.
18 And so I think we're all learning how to manage this high-
19 renewables grid. And that's exactly as it should be,
20 because it's changed. It's called "change" and so we have
21 to manage change.

22 And so I just think Australia would not be facing
23 some of the challenges they're facing if they had been
24 doubling down on building efficiency for the last 40 years,
25 50 years like we have, right? They would have a lot more

1 advantageous situation. But they also have a different
2 landscape on the supply side, and Europe, etcetera.

3 So anyway, I think we're treading new ground here
4 and we're forging a path that other people are absolutely
5 going to walk down. And I do have a lot of confidence that
6 despite the challenges that we're going to figure it out
7 and get there and understand what the new definition of
8 reliability sort of really means in practice as we go
9 forward. And so there's this bridge period to get to 80-90
10 percent renewables from where we are now is a particularly
11 kind of precarious bridge to cross. But I think we have a
12 team to do it. The next item is going to talk about some
13 of our data resources.

14 And I want to just finally highlight the fact
15 that our analytical chops and our cross-agency analytical
16 work is going to just be key for building this bridge.
17 Maybe it's flying -- the analog is flying a plane, building
18 a plane while we're flying it, or crossing a bridge while
19 we're building it, but I think either way we need some good
20 engineers and analytical people. So pick your metaphor.
21 But in any case, I have a lot of confidence. But also I
22 think we all understand the responsibility we have, so
23 looking forward to keeping on with teamwork going forward.

24 COMMISSIONER MONAHAN: Chair?

25 CHAIR HOCHSCHILD: Yes?

1 COMMISSIONER MONAHAN: I'm sorry, can I?

2 CHAIR HOCHSCHILD: Please.

3 COMMISSIONER MONAHAN: So one thing I forgot to
4 mention is just I think it would be helpful, and it was
5 something actually that Vice Chair Gunda said that spurred
6 this comment, to understand sort of the price we paid in
7 terms of using diesel backup generators in terms of costs
8 and what we are learning from that. So that we can do our
9 due diligence or do whatever we can to keep the lights on,
10 but also keeping air quality, community impacts, and
11 prices, electricity prices, minimized as much as possible.
12 So I think for a future discussion that that's information
13 that would really be helpful to me.

14 CHAIR HOCHSCHILD: Thank you so much.

15 VICE CHAIR GUNDA: So Chair, just a --

16 CHAIR HOCHSCHILD: Okay.

17 VICE CHAIR GUNDA: Commissioner Monahan, that's
18 also required in the 205, 209 and 846 language. I think we
19 need to look into that when we bring it back.

20 CHAIR HOCHSCHILD: It's a great point. Before we
21 close on this item I did want to highlight one other
22 success story. There were, as we discussed, all-hands-on-
23 deck and people showing up and conservation and finding
24 additional resources and everything else, but the energy
25 storage piece of this is amazing.

1 So we increased energy storage, grid-connected,
2 utility-scale energy storage fifteen-fold since 2019. We
3 went from 200 megawatts to 3,600 megawatts in three years,
4 which is amazing and unprecedented. And going forward
5 we're going to get to -- the goal is to get to 15,000
6 megawatts by the end of the decade. And the Governor just
7 signed this legislation accelerating SB 100. We're now
8 doing 90 percent carbon-free by 2035, 95 percent by 2040,
9 and energy storage is a critical piece of that.

10 And as I mentioned we'll be voting on an item
11 later today in that field. But that's an incredible
12 success story that I don't think is well understood in the
13 state. And it's a huge part of the success and what we
14 need to be accompanying these very low-cost, renewable
15 resources like solar and wind storage. So thank you again
16 David, to you and the whole team, really well done.

17 Colleagues with your permission, I was going to
18 propose we take this next information item and then break
19 for lunch. But if folks -- would that be amenable? Okay,
20 so let's do that.

21 We'll move down to Item 5, Information Item On
22 Energy Data Modernization. Welcome to Jason Harville.

23 MR. HARVILLE: All right, thank you Chair. It's
24 a tough act to follow David, but a motivational one.
25 Great.

1 Good morning Chair, Vice Chair and Commissioners.
2 I am Jason Harville. I'm our Director of Energy Data and
3 Analytics and I lead our Energy Data and Analytics Office.
4 The office is responsible for enterprise-level data
5 infrastructure, management, governance. It's also
6 responsible for leading our data modernization efforts.
7 Next slide, please.

8 I'm here this morning to update you on the
9 successful completion of several major milestones in our
10 data modernization efforts and where we plan to go from
11 here. So these efforts are providing many benefits to the
12 state of California. This analytical basis that we're
13 talking about, the data work we are doing will power that:
14 faster, more accurate, more powerful data-driven analysis
15 in support of California's goals. We are also talking
16 about getting Energy Commission data and analysis where it
17 needs to be so that our partners in government and the
18 private sector can make the most use of our data we are all
19 working on this together. And we are doing this at
20 significant cost savings to our organization, to other
21 organizations in the state, and ultimately to ratepayers.
22 All right. Next slide, please.

23 Before I tell you how we're doing this exactly I
24 just kind of want to remind you where we started here. A
25 few years ago we got new data collection authority for a

1 very large, disaggregated demand data under Title 20,
2 Section 1353. It's hard to overstate how big this data is.
3 It is orders of magnitude larger than we had the capacity
4 to handle at the time. Nothing we had built would be able
5 to come close to handling this level of data.

6 So we had a choice. Essentially, we could build
7 out a specialized system just for this particular data
8 effort to handle this data. That would have been very
9 costly, required a lot of contractors' support. And
10 instead we recognized the opportunity to modernize across
11 the organization, how we're handling all of our data, our
12 analytics, following the state's cloud-first posture,
13 moving the Energy Commission into the cloud and into a
14 modern data and analytics platform.

15 So to do that we created my office. I'm the
16 first person to lead this office. And we have been getting
17 a lot done. I'm excited to tell you about it here. Next
18 slide, please.

19 Great. So first and foremost the catalyst for
20 all of this, that very, very big, disaggregated demand
21 data, we've done it. We are currently receiving this data
22 now regularly from utilities. This is terabyte scale. A
23 terabyte is a million megabytes, just for reference here.
24 Coming into the Energy Commission, this is approximately
25 two trillion records right now, which you could think of as

1 about two million Excel spreadsheets.

2 Another comparison, if you were to add up all of
3 the data that we're storing in our IT systems right now,
4 all of the documents, all of the staff picnic photos, all
5 of the data, everything that we have in our network and all
6 across it, we have brought in more than that over the last
7 year alone now. So we've more than doubled our information
8 assets here at the Energy Commission as a result of this
9 data set.

10 It's huge, and it's going to be fundamental to
11 making data driven decisions and analysis like we're all
12 talking about here and maximizing the use of our data at
13 the Energy Commission.

14 So we have all this data, but where does it go?
15 And how are we making use of it? Next slide, please.

16 Fundamental to our technology strategy for
17 dealing with this data is our data warehouse. We have
18 built a cloud-based data warehouse. To my knowledge, it's
19 the first instance of a centralized data repository in the
20 history of our organization. We've never been this
21 centralized, we never had all of our data pulled together
22 for a common purpose and in a common way like this. This
23 is important.

24 The technology for the size of the data like I
25 mentioned, it's in the cloud. It's huge. Big data

1 requires a big space, but also very -- a lot of big
2 computers, right? We need a lot of compute. We have that
3 now in our data warehouse, we can handle this data at
4 scale, we have compute at scale. And from a data strategy
5 point of view we also have a single source of truth. When
6 we bring our core data into the data warehouse, it is there
7 as a master copy. And that's what I mean when I say a
8 single source of truth. A core piece of data has a master
9 copy that resides in one place in the data warehouse. And
10 when anybody in the Commission asks a question of that
11 data, we get the same answer. We get the right answer, we
12 get it quickly, we don't have conflicting datasets. That's
13 our single source of truth.

14 Now, this data warehouse, this cloud solution
15 compared to the options that it would have taken us to
16 build this on our own, build it in a state data center or
17 whatnot, is more than an order of magnitude cheaper for us,
18 for ratepayers. We're talking 90 percent-plus cost savings
19 just on that technology alone compared to what we would
20 have built.

21 And we have all the power and speed of the cloud.
22 When we need more speed we just turn up the dial. It costs
23 more, but it's there. It's available, there's no delay,
24 there's no planning, none of that is required. We have
25 that today. But how do we get data into the warehouse?

1 And what do we do with it when it's coming out? Next
2 slide, please.

3 To address the first question we have built a
4 data submission portal. This is a web application. But
5 you can just think of it as another page on our website to
6 standardize how we bring data into the Energy Commission.
7 This is for our stakeholders who regularly submit data to
8 the Energy Commission.

9 Right now we have a whole wide variety of ways
10 that data is coming into the Energy Commission, probably
11 more ways than the number of datasets that we actually
12 bring in. It's all out there. And which means a lot of
13 redundant overhead. Each one of these different data
14 collection efforts can cost \$30 or \$40,000 a year annually
15 to maintain. So the data submission portal is meant to
16 centralize that, provide our stakeholders with a modern
17 web-based capability to submit electronic data to the
18 Energy Commission, give them a consistent user experience.
19 A lot of our users submit multiple different kinds of data
20 to us, especially at utilities. They'll have a single
21 user, a single platform to do that. It reduces the burden
22 on utilities and other stakeholders. They're realizing cost
23 and time savings just like we are.

24 It also gives us, given that this is now in a
25 standard electronic form, we can do things like reject,

1 disallow a submission from coming across if some kind of
2 simple mistake has been made. If there is letters in a
3 date field or something like that. The kind of thing that
4 today the stakeholder would spend their time submitting.
5 Our staff would spend time reviewing. They'd find an
6 error. There's some back and forth. That's a delay in
7 moving that data into being actionable and usable by the
8 Energy Commission. It's also just a significant time waste
9 on both sides of it. We can prevent that now. We can save
10 our stakeholders money, we can save ourselves money,
11 ratepayers money, and increase the time to action for our
12 data from when we get it.

13 I think this will be very big and unpopular with
14 our stakeholders also. All right, next slide, please.

15 Great. So we're bringing a bunch of data in.
16 It's residing in this great new cloud infrastructure. What
17 are we doing with it on the other side? The answer is
18 whatever we want. We have an incredibly flexible platform
19 now for all kinds of analysis.

20 But a feature here, a product that I want to
21 highlight for you is Tableau. We've adopted Tableau.
22 Tableau is software for interactively visualizing data on
23 the web. So we have a number of these visualizations up
24 already.

25 You can see an example here of our zero-emissions

1 vehicle dashboard, which is live on our website now. This
2 allows folks who come to the website to be able to not just
3 see our data visualized, not just receive our
4 interpretation and our story of what this data is saying,
5 but then to modify it themselves. To filter it, to sort
6 the data, to look at it from different angles on their own
7 right there on the web page. And then to download the data
8 as we have it or to download it in the way that they have
9 sorted and filtered it.

10 So again, this is this is an example of a lot of
11 time and cost savings and much faster time to results for
12 our data. Because currently the ideal situation is someone
13 goes to the website and either the table of data that we
14 have available for download -- it happens to be in a format
15 that is useful for them and that they have the tools on
16 their end to make use of -- or we have a static
17 visualization that hopefully is representing the data in a
18 meaningful way for them.

19 But that's not true for everybody. So for those
20 that isn't, they need to contact the Energy Commission.
21 This is a data request or a request for a different, I
22 don't know, could be different aggregation of it, right?
23 Okay, you have daily loads, but what's the hourly load?
24 That's not on the website. That requires staff time. It
25 requires time from the stakeholders to reach out to us.

1 There's all that back and forth again of somebody outside
2 of the Energy Commission saying, "Okay, but what about it
3 from this angle? What about this data?" This addresses a
4 lot of that for us. It allows public direct access, self-
5 service access to the information that we're putting out
6 there in interactive visualizations.

7 So that's cost and time savings for us on serving
8 a bunch of data requests, it's cost and time savings for
9 our stakeholders. And since this is connected into our
10 data warehouse, the information is always up to date. The
11 most up-to-date and relevant information that we have is in
12 that visualization. So we can have plausibly data
13 submitted to the Energy Commission and within hours that
14 data is ingested, processed in the data warehouse, visible
15 in a visualization like this and accessible to the public.
16 All without any additional time or cost on the Energy
17 Commission and Energy Commission staff to get that data out
18 to them. I think that's going to be huge. We're going to
19 be building a lot of these.

20 We have, I think, six on the website. Now we
21 have six more on deck. And we haven't even formally rolled
22 Tableau out yet. It's been on kind of a limited access.
23 We're actually in the middle of our rollout right now. So
24 here in about two weeks we'll have formally rolled out to
25 our largest Division, and that's only going to stimulate

1 the demand. So I'm really excited to see how we're going
2 to be able to be putting our data and our results out there
3 for the public faster, better. In a way that better serves
4 them and saves all of us time and money in the process.

5 Next slide, please.

6 Great. Now in my opinion, the use case for our
7 data that I'm most excited about is data sharing. Getting
8 our data out there where it needs to be securely,
9 efficiently, flexibly. Being able to get our data into the
10 hands of our partners and the public who need to use it and
11 can and are working with us to achieve our collective
12 goals. So we have now in our new cloud architecture, we
13 have data-sharing capabilities like we've never had before.
14 They're unprecedented. I'm very excited about them.

15 To give you a couple of examples we can now allow
16 contractors access to large-scale data that would have
17 required significant cost and time to provide to them
18 before for when they're helping us with our work.

19 We can also provide them a walled-off space in
20 the data warehouse. If it's data that we don't want to
21 actually leave us we can put it in there and have them do
22 their work and analysis there. They're having to query the
23 data directly in our data warehouse and make use of it
24 there.

25 Another example is we currently have a very

1 large-scale data share with the Public Utilities
2 Commission. This is a terabyte-scale data share, which
3 would have been significant cost in the old world just to
4 just to get terabytes of data to someone. That's a
5 significant effort. That's, I mean, it's such a
6 significant technical challenge that sometimes folks just
7 put it on a hard drive and drive it over where the data
8 needs to go. We don't have to do that.

9 They've adopted the same data warehousing
10 technology that we have. We have a direct share with them
11 that does not duplicate the data. We haven't duplicated
12 the data, we haven't duplicated the cost of storing and
13 processing it, all of these things. They have direct
14 access to the data that we've shared with them as if it was
15 on their site. As if it was in their own data warehouse.
16 They're making use of this data. And we're spending tens
17 of thousands of dollars a year bringing this in, cleaning
18 it, storing it, making that available. That means we are
19 saving tens of thousands of dollars for the Public
20 Utilities Commission alone with this one data share.

21 And we have the opportunity to do this with all
22 of our partners to build this out, to spread it. And
23 ultimately a key objective of my office, of our data
24 monetization efforts, of our data vision is to become a
25 centralized hub for energy data in California. That

1 doesn't serve just California, obviously like we've heard.
2 We're leading the nation and the world in a lot of these
3 efforts. And we have capabilities that our analogous
4 energy agencies just simply don't have across the rest of
5 the country.

6 So we can build this hub. We can be the central
7 source of data to get it out where it needs to be into the
8 hands of folks who need it reliably, quickly, and cheaply.
9 Great. Thank you. Next slide, please.

10 All right. So we can do all this today, but we
11 have more data and more data collection efforts than we
12 could ever accomplish in the next year, right? We have a
13 lot of work ahead of us.

14 Three priorities for continuing to build and grow
15 everything that I've talked about today:

16 We're growing the size of this office, building a
17 dedicated data engineering team. And basically bringing on
18 more staff to help us accelerate these efforts. We have
19 some additional funding and we're going to make use of that
20 to just build this out as quickly as possible.

21 We are moving our core data to the cloud. Every
22 new dataset that we want to realize these benefits and be
23 shared like this and be in these Tableau visualizations
24 needs to be moved up into the data warehouse.

25 That requires some engineering work to build that

1 out. But once it's there we see all this, so this is going
2 to be a key priority for us is now that we have everything
3 in place. It's implementation. It's bringing all of our
4 core data flows in through the data warehouse into this new
5 system to realize all of these benefits, which ultimately
6 realizes the main goal I just talked about. Which is
7 expanding our ability to share out our data and our
8 analysis to the public, to our partners, to the rest of the
9 world. All right, last slide, please.

10 This effort, like I mentioned this is there's
11 more work than we could possibly do in a year, so we have a
12 lot of prioritizing ahead of us. Figuring out what is the
13 most important data to get out there, the best methods for
14 getting it out there. How we can maximize the use of our
15 data, which is ultimately public data in a way that
16 protects the privacy and confidentiality of this data.
17 Because it is big. A lot of it is very sensitive. And we
18 need to do both. We need to maximize the benefit while
19 protecting privacy.

20 We have a workshop coming up in November that is
21 geared specifically towards helping us do this
22 prioritization. What should our priorities be? What are
23 the most effective methods that we should be considering to
24 do this? And we're going to be featuring panel discussions
25 across two dimensions of this.

1 The first is data sharing, which is pretty
2 straightforward. How can we get data out there? What is
3 the most useful forms to get it out there? And in cases
4 where the data is too sensitive to give itself, is there
5 some method we can do to anonymize that type of thing to
6 protect privacy?

7 The second question is, in cases where the data
8 itself just can't be put out there, it's either too
9 sensitive to be put out in a usable form or it's just
10 impractical. This data is very big. And not everybody can
11 handle it. Not everybody can take on the cost of analyzing
12 it themselves. So what can we at the Energy Commission do
13 in terms of analysis as a public service to address those
14 situations? So even if the data needs to stay on our side
15 for pragmatic or legal reasons how can we still get the
16 utility of that data out there, to the public, to our
17 partners, to the markets to facilitate all the work that
18 we're doing together in support of California energy goals?
19 Thank you. Thank you so much.

20 CHAIR HOCHSCHILD: Great. Thank you so much,
21 Jason.

22 Let's go to Commissioner discussion. Vice Chair
23 you want to start us off?

24 VICE CHAIR GUNDA: Yeah, thank you Jason. Just
25 I want to begin by saying a big thank you. I know how much

1 effort it's been. I liked that you started with Title 20
2 and how much work it's been since then. But I just
3 recognize also Malachi Gutierrez who worked on in the Title
4 20 and his work in crafting that original work. So thanks,
5 Malachi, if you're listening. And in all the work that you
6 have been doing in both cultivating a team, but a
7 collective vision.

8 And I wanted to call out just a couple of things
9 that you have been doing that's exceptional. And I think
10 collaboration doesn't happen on the natural, in a lot of
11 these things. When something's cool everybody wants to do
12 it in their own silo. So fostering collaboration requires
13 thoughtfulness, calm and competence, but also kind of
14 promoting a common vision which you have been able to
15 really do both within the agency but with our collective
16 partners. So I just want to thank you for your leadership
17 in really developing a vision for all of us.

18 And as you mentioned, we want to be -- when CEC
19 was put together one of our core missions was to be a data
20 repository for the state. Obviously, things have changed,
21 the meaning of what being a data repository has changed. I
22 want to commend both your governance team, but also our CCO
23 who has spent a lot of time thinking through the governance
24 rules on how best to move this.

25 I am looking forward to the workshop. I think

1 it's a great next step.

2 And I also want to just congratulate all the
3 staff who have been working with you to move this
4 conversation forward. Specifically Hilary Poore, Erik
5 Lyon, Kristen Widdifield and (indiscernible) who have been
6 working with you closely on moving this forward.

7 Finally, before I hand it off, Commissioner
8 McAllister for his incredible work on data for many, many
9 years to really foster this vision for the future.

10 CHAIR HOCHSCHILD: Commissioner McAllister?

11 COMMISSIONER MCALLISTER: Thanks, Vice Chair
12 Gunda. Thanks Jason, great presentation.

13 And I'm super-excited where we are. I mean,
14 first of all let me just say you lead that office and
15 everybody knows you lead that office. I don't think
16 everybody knows the breadth of skills that you brought to
17 this endeavor. So you are sort of a good -- just an
18 excellent people-person manager and kind of just building
19 the team, but also, when necessary -- and it has been
20 necessary -- you've jumped in and actually done a fair
21 amount of the data engineering that's actually required.
22 And I just think from sort of soup to nuts, you've got this
23 amazing skillset that's sort of held it all together. And
24 just thank you for putting that to work every day.

25 And reiterate thanks to Malachi on the regulatory

1 front, because I think it took a number of years to kind of
2 get everything aligned so that we can actually do this data
3 collection.

4 And I remember -- I also want to just thank Drew.
5 I remember the original meeting, maybe it's probably been,
6 what, seven or eight years where we sort of said, "Okay
7 everybody, --gosh darn it in so many words -- we're doing
8 this." And it was a big lift, and not everybody was on
9 board. And it took several years I think for kind of the
10 lightbulbs to come on and say, "Okay, we are in the age
11 that we need to be doing this." And that as you shared
12 Vice Chair Gunda, as you said we -- historically, the
13 Energy Commission was that repository back in the analog
14 era. There just wasn't anywhere near the kinds and
15 quantity of data that we have today. And so the modern
16 version of the Energy Commission's leadership here is this.

17 And the fact that we can sort of be the node
18 across all the energy agencies and actually even build with
19 time, build relationships with non-energy agencies, and
20 health care, and justice, across the board to many, many of
21 the other agencies of this state. I think we're going to
22 see a lot of creativity actually, in collaboration to
23 address some of the core -- the housing agencies -- the
24 core issues that we're facing in this state. And energy
25 and then the work that we do on siting and land use and

1 everything, efficiency buildings, it really does intersect
2 with some vital parts of our state's economy well beyond
3 energy.

4 So as a shared resource I think we're showing
5 amazing leadership here, which is exactly as it should be.
6 And as I go and talk to other states through NASEO, and
7 talk to other countries this idea, the thing we're doing
8 with data and the authority that we have and how we're
9 exercising it, it blows people away. They just have no
10 concept. It opens their minds to things that they had not
11 even thought about in terms of what an energy agency can
12 do. And I think it's really opening the creativity.

13 And I think it's going to just have a lot of
14 knock-on effects that are incredibly positive way beyond
15 our borders, but certainly here in California. So I'm just
16 really gratified at the point we've gotten to, and really
17 hopeful and excited about what's to come. So thank you,
18 Jason, for all your leadership on this front.

19 CHAIR HOCHSCHILD: Okay, let's go to Commissioner
20 Vaccaro. I think you both had up your hands. Yeah, who
21 would like to go first?

22 COMMISSIONER MONAHAN: (Indiscernible.)

23 CHAIR HOCHSCHILD: Yeah. Go for it.

24 COMMISSIONER VACCARO: Yeah, thanks so much for
25 the presentation. It's funny to me how you make data so

1 interesting and exciting. And I think it's the attributes
2 that you bring, like you're passionate about this work.
3 And it shows that you've really demonstrated with your team
4 just that attention to detail. And it shows in this
5 presentation, and the things that happen internally in the
6 building.

7 I'm wondering if you could spend a little bit of
8 time -- and I'm not sure how much of this is public-facing,
9 so just whatever you're comfortable with and that's
10 appropriate -- just really talking a little bit about sort
11 of the security and the protecting the data.

12 This is huge what we're doing. I mean, it's
13 phenomenal. I remember, as Commissioner McAllister said,
14 the beginnings of this. It was vision on the part of Drew
15 and Executive Office to create this office, to bring you
16 in, and to really think about the efficiencies. But it's a
17 lot of data and we've modernized it. So I'm just wondering
18 like as a repository in the sharing space, whatever makes
19 sense in a public setting, what you can say just to sort of
20 give assurances about that.

21 MR. HARVILLE: Yeah, sure. Thank you. We kind
22 of split this into two things. One, one aspect of security
23 is you're talking about infrastructure, right? Did
24 somebody somewhere configure a server properly or update it
25 or whatnot? These types of vulnerabilities are where a lot

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1 of hackers get in, right? Something just wasn't configured
2 right, there was some kind of infrastructure issue, right?

3 On the infrastructure side, moving to cloud
4 services actually significantly improves our security
5 posture. Our data warehousing service, Snowflake, this is
6 what they do. And they're built on Amazon Web Services.
7 For anybody who doesn't know Amazon Web Services powers a
8 significant part of the Internet. Frankly they're
9 absolutely massive, this is what they do. They have more
10 security resources and experience than the state could ever
11 reasonably put together building this on their own.

12 And so they are managing that. So that's the key
13 aspect of the cloud is the concept of a managed service.
14 And that's what that management part of it means. It means
15 we aren't in there making sure that a server on the
16 computer, out of 100 computers that are running some big
17 powerful query for us in the cloud, we're not responsible
18 for all those little computers. Amazon Web Services
19 ultimately is. And this is what they do. It's their bread
20 and butter and they're world leaders in it. So our
21 security posture on the infrastructure side is
22 significantly improved by moving to the cloud. And that's
23 one of the reasons the state has a cloud-first posture on
24 technology now. That's infrastructure.

25 There's the opportunity for human error though

1 also, right? Ultimately, the computers work, but they do
2 what you tell them to do. Computers are dumb. They'll do
3 exactly what you tell them to do which includes sharing
4 your data to the whole world if you ask them to. Just ask
5 the NSA. They've made this mistake in Amazon Web Services,
6 releasing huge amounts of data, because somebody didn't use
7 the technology correctly.

8 So broadly speaking, there's a lot to say on
9 that. But I'll emphasize one thing. There's kind of two
10 schools of thought. You can think of them as "opt in" and
11 "opt out" from security, right? And "opt out" says someone
12 gets access to something, and they have access to all of
13 it. And then you create little areas that you opt them out
14 of. That's what our network drives look like right now.
15 Somebody gets access to their office network drive, and
16 they can see everything. And if we have something that's
17 private we create a special folder and exclude everybody
18 else from it except the people who need it. That's an opt
19 out.

20 A better approach is an "opt in." Somebody gets
21 an account and they have access to nothing at all. And
22 then you specifically say every single thing that they have
23 access to. So it's more of an affirmative, you need to
24 take action to give someone access to something. That's
25 our posture in the cloud. That's our posture in the data

1 warehouse. These technologies in the service give us
2 access to much more granular controls for that, so we can
3 decide specifically which people or which roles or which
4 groups need specific access to which things. And grant
5 only those intentionally, so we don't have inadvertent
6 access. And we really minimize the opportunity for human
7 error when we do that. Yeah.

8 CHAIR HOCHSCHILD: Okay. Let's go to
9 Commissioner Monahan.

10 COMMISSIONER MONAHAN: So Jason thanks for all
11 your hard work. It actually seems like COVID in some way
12 accelerated progress at the Energy Commission in terms of
13 this embrace of remote technology and really kind of
14 fostered the work that you're doing. Or maybe the work
15 that you're doing was timely in that it kind of embraced
16 this organization-wide change that was happening.

17 And I love that you put the ZEV dashboard up
18 there and showcased the Tableau format. It's just I can't
19 tell you how many stakeholders I work with -- I was just
20 with the World Resources Institute on their School Bus
21 Advisory, Electrification Advisory Committee. And I said,
22 "Oh, we publish all this data. Just go to the ZEV
23 dashboard. You can see all the school buses. You can see
24 where they're located." And they were ecstatic. They were
25 like, "What? Nobody else does this." And that's what we

1 want to be. We don't want to be like the state that nobody
2 else does this. In fact, I would say globally it's hard to
3 get the data.

4 And so I just want to congratulate you and the
5 team. And I look forward to continuing to deepen that,
6 like we really want the public to access our information.
7 We want to make it easy for people understandable so they
8 can take the action. And we can track our progress. I
9 mean, the Governor's Office is chomping on the bit for the
10 ZEV, like in vehicle sales. And they reach out to us and
11 say, "When are we going to get that data?"

12 And so people are excited about this data. And I
13 think I'm on that ZEV dashboard more than anybody in the
14 country. I would say on a biweekly basis I'm on that. So
15 I just look forward to more tools that are really consumer
16 friendly.

17 And I had a question. I'm not sure actually if
18 it's Vice Chair Gunda or to you, but there's also the
19 California Planning Library effort that's going on. And I
20 was unclear about how that intersects with like the ZEV
21 dashboard and other analysis. For example, the AB 2127
22 analysis that the Fuels and Transportation Division is
23 responsible for in terms of looking at 2030 charging needs.
24 Like how do they all, how do all these pieces fit together?

25 VICE CHAIR GUNDA: Yeah, Commissioner Monahan,

1 just a kind of -- I think 30,000-foot level, the Planning
2 Library is the idea of just an organizing principle, upper
3 data. So what we'll see in the IEPR presentations towards
4 the final IEPR adoption is kind of a recommended schema of
5 organization. So all these dashboards and all, how do we
6 organize in a way they're accessible?

7 So we might have landing pages for
8 transportation, and from there you could have all these
9 different elements within the transportation. So it's more
10 of an organizing principle on bringing these different data
11 products we're going to develop into a cohesive, user-
12 friendly interface.

13 And Jason and I discussed about how best to have
14 Hilary and others who are working on the IEPR front on the
15 Planning Library with him to make sure that the organizing
16 principle, the backbone that he is trying to present as
17 well as Lindsay and the Comms, all come together in a way
18 that we all agree on a synchronized vision of data access.

19 CHAIR HOCHSCHILD: I just had one last question
20 just along the lines of Commissioner Vaccaro's question of
21 the last item, which is just can you give us just one or
22 two of the best-use cases specifically for this new
23 capability? What comes to mind in terms of how this, these
24 abilities can be used?

25 MR. HARVILLE: Well, data sharing is number one,

1 right? And we talked about that already, So I don't want
2 to go back over that. But that is fundamental. That's how
3 we get it out there to everybody who works with us.

4 But data sharing is the same challenge internally
5 also for us. So I think I would highlight that side of it.
6 We have the ability now to serve our data to our own staff
7 -- our internal customers is how my office looks at it --
8 in a way that is more efficient and stable and reliable.
9 And frees them up from the busy work of cleaning a dataset,
10 of keeping track of where spreadsheets are, right? Our
11 economists didn't get their degrees to manage a bunch of
12 spreadsheets and folders, right? We can take that work off
13 their shoulders, free them up to do the creative,
14 intellectual work that we really need them here to do.

15 So I would say that as a broad category of use
16 cases is going to be a big change for them. We will free
17 up the staff who are organizing data. Free up the staff
18 who are working with data to put their abilities to the
19 best use possible.

20 CHAIR HOCHSCHILD: Yeah, okay. That's perfect.

21 Well on that note we'll break for lunch. It's
22 now 12:30. I suggest we reconvene in an hour at 1:30 back
23 in the room. Thank you.

24 (Off the record at 12:29 p.m.)

25 (On the record at 1:32 p.m.)

1 CHAIR HOCHSCHILD: Thank you, welcome back. And
2 my thanks to the CNRA cafeteria. It's nice to have some
3 good food. I remember the old one we had in the old
4 building, so it's a really nice treat.

5 We concluded Item 5, so we'll turn now to Item 6,
6 Information Item on Vehicle-to-Grid. I welcome Jeffrey Lu.

7 MR. LU: Good afternoon, Commissioners. And
8 hello to all the in-person and remote attendees. My name
9 is Jeffrey Lu, I work in the Fuels and Transportation
10 Division. Today, I'd like to spend a bit of time going
11 over the CEC's strategy to help realize our growing fleet
12 of electric cars as grid assets. This is what we sometimes
13 call vehicle grid integration. And I think I'll notice
14 that the story here is actually pretty similar to what we
15 heard this morning, just with different characters. Next
16 slide, please.

17 Vehicle-grid integration, or VGI, is a blanket
18 term for the various strategies that alter where, when, and
19 how we charge up our EVs while considering both the needs
20 of the grid and also the needs of the driver. Examples of
21 VGI include managed one-way charging, where a charger or
22 vehicle might schedule a charging for a later time in
23 response to lower electricity rates. It also includes bi-
24 directional charging, which enables cars to provide energy
25 back to a home, a building, or even the grid.

1 VGI is a crucial tool that offers many benefits,
2 and I'm highlighting four of those key benefits on the
3 screen here.

4 As California brings on more renewable generation
5 to decarbonize the electricity grid we'll need to adjust
6 some of our electricity consumption to sync up to times
7 when renewable generation is abundant. EV charging is a
8 very significant load. However, it also happens to be
9 usually quite flexible. VGI can help align EV charging to
10 times when it's most beneficial to the grid. This EV load
11 flexibility can support renewables integration, peak
12 avoidance, and other desired outcomes.

13 Beyond the load flexibility aspect VGI is also an
14 important tool in our chest to strengthen grid reliability.
15 As a growing number of vehicles and chargers are equipped
16 to provide energy back to the grid customers may choose to
17 sell energy back to the grid during peak times in exchange
18 for payment. During grid emergency events, like those we
19 saw last month, the ability to harness this energy could be
20 a gamechanger. Initial staff calculations suggest that in
21 2030 light-duty EVs in California could provide in the
22 neighborhood of 6 gigawatts of export capacity, assuming
23 improvements to V2G technology and also customer
24 participation.

25 To be clear, VGI is not just bring good news for

1 the grid. It also brings a lot of good news for the
2 drivers. Bidirectional chargers and vehicles can help
3 provide backup power to a home or a microgrid during grid
4 outages and this can provide much needed energy resilience.

5 Further, by intelligently scheduling charging
6 around off-peak times drivers will save money and reduce
7 the carbon emissions associated with their vehicle
8 charging.

9 All this said, today VGI is often talked about in
10 the theoretical. Practical options for VGI today are
11 limited because most cars and chargers are not equipped
12 with these features. Some products do support VGI today,
13 but they can be clunky and difficult to use, or lock you
14 into certain brands or certain vehicle-charger
15 combinations. Importantly, drivers have little incentive
16 to charge in grid-friendly ways today. Current electricity
17 rates often do not reward load flexibility, and most don't
18 allow for export at all. What's available today in the VGI
19 space is inadequate if we want to scale. Next slide.

20 Staff have a vision for VGI moving forward. We
21 want VGI to be widespread, easy to use, with diverse
22 options for different customers. So what does this look
23 like in practice? First, we'll need a range of options
24 for folks to be compensated for being good grid citizens.
25 This could mean improved electricity rates or event-based

1 programs that provide bill savings in exchange for
2 responding to a specific grid event.

3 We'll also need a variety of easy-to-use and
4 interoperable products that help customers participate in
5 these rates and programs that we are talking about. Most
6 folks won't want to constantly think about how or when they
7 want to charge up their car, so we need products that keep
8 this simple, delightful, and that help the customer accrue
9 savings or other benefits.

10 I also want to emphasize the interoperability
11 aspect here. To scale, we'll need these products to work
12 regardless of the customer's vehicle model or charger
13 model. At the end of the day we want options for VGI to be
14 always available even if the customer chooses not to
15 participate.

16 Finally, all of this is to yield widespread
17 charging load flexibility that contributes to a cleaner and
18 more reliable electric grid and it helps us achieve our
19 climate goals.

20 To fulfill this vision we'll need every corner of
21 the EV and charging ecosystem to do its part. CEC and
22 other regulators play a very important role in setting the
23 foundation for widespread VGI, and on the last slide I'll
24 discuss some of the current actions we're taking at CEC to
25 help realize this vision. Next slide.

1 On this slide here I'm calling out four verticals
2 among CEC's existing core competencies. To support the VGI
3 vision that I just discussed staff has identified ways we
4 can improve or refocus our efforts in these existing
5 workstreams.

6 I'll start at the very left with planning and
7 analysis. One of the most important things we can do as an
8 agency is to analyze and quantify how VGI fits into our EV
9 charging and grid-planning models. That's our AB 2127
10 analysis and Integrated Energy Policy Report, respectively.
11 The CEC's IEPR, for example, includes grid forecasting
12 that's used by the Public Utilities Commission, and
13 utilities. By quantifying VGI into these forecasts we can
14 help ensure that utilities are considering VGI impacts in
15 their own planning and grid buildout.

16 In the yellow box we have tech and funding
17 deployment. CEC deploys a lot of money, and we'll be
18 directing some of this money specifically to help
19 accelerate the development and deployment of easy-to-use
20 VGI products.

21 Additionally, we may also use funds to
22 electrically prepare sites and buildings for EV charging.
23 A driver can only integrate with the grid if they can plug
24 in and connect to the grid, so we want to make sure that
25 more drivers have opportunities to plug in where they park.

1 In the orange box the CEC is also implementing
2 various regulations that will support VGI. This morning we
3 had a great presentation on the Load Management Standards
4 and those may help spur the availability of rates that
5 better reflect grid conditions. That same team is also
6 working on MIDAS, which will make sure that VGI products
7 and other connected devices can actually access and respond
8 to a customer's rate. The CEC may also explore other
9 regulatory levers to promote VGI going forward.

10 Finally, on the very right, the CEC is doing a
11 lot of work in the standards space, including providing
12 recommendations on connector and communication standards to
13 make sure that the VGI products out there are actually
14 interoperable. We're supporting the industry's
15 implementation of standards through testing facilities and
16 collaborative events, and we're also working on an
17 equipment list to streamline the interconnection of
18 bidirectional chargers.

19 That's all I have for you today. I know this was
20 extremely compressed, but I hope it gives you an overview
21 of some of the work that we are doing in this area. I'm
22 happy to take any questions. Thank you.

23 CHAIR HOCHSCHILD: Thank you so much. Let's go
24 to Commissioner discussion starting with Commissioner
25 Monahan.

1 COMMISSIONER MONAHAN: Well I am excited for this
2 conversation. It actually fits so well with Load
3 Management Standards, and actually discussions about
4 reliability and how all these pieces fit together. And
5 Jeffrey has been a real thought leader and just really
6 great at collaborating across different divisions and
7 pulling together a vision that is comprehensive across the
8 agency.

9 And one of the reasons I was excited to have this
10 conversation actually is because Vice Chair you and I
11 cannot talk about this, except in public forums. And we
12 have a process with the IEPR that the CPUC uses for its
13 regulatory and oversight of the IOUs. And there's data
14 that comes around vehicles' impact to the grid as part of
15 that process. We have the AB 2127 report, which we're
16 required to do by the Legislature which also does this.

17 And I've been talking with EAD about wouldn't it
18 be nice if we just had one product, one talking point, and
19 that we could all use it and not have different talking
20 points with different audiences that creates some confusion
21 periodically. And so it takes more work from EAD to engage
22 with the 2127 report. It's not on the same cycle. And my
23 hope is that the AB 2127 report becomes this repository for
24 EAD's thinking on grid impacts -- our various research
25 entities that are also providing that same information --

1 from looking at medium-, heavy-duty and light-duty as well
2 and just trying as much as possible to have one talking
3 point. I don't even know if it's possible, honestly. It
4 may be too complex but to have, at least try to use AB 2127
5 to be like the singular voice of the Energy Commission.

6 VICE CHAIR GUNDA: Yeah, first of all thank you,
7 Jeffrey. That was excellent kind of trying to pull the
8 four teams together. I mean, I saw that planning and
9 analysis was the first bucket. And also another bucket I
10 think for an intersection would be the investment plan that
11 846 requests us to do. So I think those are the two
12 elements I thought of as intersection specifically. And
13 thank you for initiating the conversation.

14 I think two elements, just on the IEPR forecast
15 and the demand scenarios and the synchronization of the
16 2127, I think it would be a really good discussion to have
17 a couple of briefings internally on just the alignment of
18 timing, as you said. So I think this year -- so currently,
19 the staff in the forecasting side do demand modifiers based
20 on what the charging profile could look like, right? I
21 mean, I think two years ago when they first did it, and
22 this last time, they are basing the charging profiles on
23 some of the data we gathered from ChargePoint and such. So
24 I think it would be really helpful, not only from the
25 forecasting side but the intersection of the energy

1 scenarios, the demand scenarios, which then play into SB
2 100.

3 So I would really welcome the kind of opportunity
4 to bring them all together, recognizing just two things,
5 which is the time: how do we provide the information that's
6 needed on timely -- like every year we have to do the IEPR.
7 So there might be a way to say, "This vintage (phonetic) of
8 2127 analysis will be used for three IEPRs, right?
9 Following that, something else." But to the extent that
10 this is fast-moving, especially on the V2G, and then it
11 kind of directly impacts the procurement strategy, I think
12 we need to like make sure that the data is timely developed
13 and the strategy. And so I welcome that absolutely. And I
14 think we should do that. I don't like the idea of having
15 two separate numbers, either. And I totally agree with
16 you, Commissioner Monahan, on that.

17 The second element is just on the funding side.
18 So with the 846, the strategy right now is to look at the
19 broad reliability landscape, right? I think we've
20 mentioned this morning David kind of talked about how we
21 are framing the reliability problem. So there are at least
22 three buckets of reliability problems that we have to
23 address: whether it's the strategic reserve element,
24 whether it's just timely procurement, or even kind of
25 compensating for our long-term trajectory, right?

1 So the way that -- obviously, Drew has been an
2 important part of this -- we've been thinking about is,
3 "How do you take all the things that we haven't scaled yet,
4 like V2G, DR, microgrids in some ways, DERs, and then
5 really kind of think through where the Legislature and the
6 governor already put money?" And how we could use that and
7 where is it missing. For example, if V2G is a big bucket
8 that's missing I think we want to be able to say, within
9 the broad umbrella of that reliability investment plan,
10 let's allocate money for V2G. And so that could be done
11 through a programmatic basis. So that's kind of how we're
12 thinking right now. And obviously it has to go through a
13 public process on how many dollars we want to put in, in
14 one bucket, and then what's the process for that. But I
15 think absolutely welcome a much more close collaboration on
16 the analysis side, but also the funding side.

17 COMMISSIONER MONAHAN: And just a quick note, I
18 know other Commissioners want to speak, but just quickly on
19 the V2G side I think, we, the team is really emphasizing
20 the need to have some greater tools available to really
21 capitalize on that. So there needs to be investment in just
22 these interfaces.

23 But there has been an example -- I don't know if
24 you got in the loop -- on the Cajon Valley School District
25 in the last heat crisis it discharged 650 kilowatts to the

1 grid. I mean, that was one of the few things that we can
2 point to like on the ground this actually had value in a
3 moment of crisis in California. And school buses are a
4 special application, which may be particularly well-suited
5 for this, but just it's indicative of the opportunity in
6 trying to figure out how to unlock that. It's something
7 that Jeffrey and the team are really thinking about.

8 VICE CHAIR GUNDA: Yeah, I think I may just want
9 to note on that one. Thank you for raising that. I think
10 we used that as a talking point on kind of getting back at
11 some of the criticism we are -- or at least offering some
12 options for the criticism we received on electrification,
13 transportation electrification, in the light of not being
14 able to keep the grid safe, right? So I think that's an
15 important element.

16 I wanted to just add to that. In terms of within
17 the budget, we have two buckets of money that we could
18 potentially use for V2G. One is the Reliability Investment
19 Plan. But to the extent that it could serve as a backup we
20 could also support it through the Distributed Energy Backup
21 Assets Program, (Indiscernible.), so I think that's another
22 \$700 million that the Legislature gave us. And I think we
23 just have to agree on how much we could transform the
24 market. What's the value, public process and figuring out
25 how much we can put into the V2G bucket between those two.

1 COMMISSIONER MCALLISTER: Okay, I'll go. So,
2 imitation, great stuff. And there are a lot of analogs.
3 And we also have a -- Commissioner Monahan and I kind of
4 have a hard time talking about some of this stuff in
5 anywhere except for public forums too, because of Bagley-
6 Keene. But there are incredible parallels between the
7 building space and the EV space as we electrify both. And
8 I think a lot of the conversation from the Load Management
9 Standards this morning applies as well.

10 Really just had a couple of observations and
11 maybe a suggestion. So maybe the way we regulate buildings
12 and appliances kind of obviously I think could map somewhat
13 over to this. And certainly, as we go time-based and we do
14 hourly forecasting around load shaping and costing and
15 everything and cost-effectiveness those tools, I think,
16 could apply.

17 I guess we have the unique authority in these
18 other spaces and in buildings and appliances. And I'm
19 wondering -- so during my reconfirmation process a few
20 months ago, Senator Laird and really all five of the
21 members of the Rules Committee said, "Hey, if you need
22 anything from us feel free to ask, like new authorities or
23 different ways to make and do your jobs better," and that
24 kind of thing. And so I guess I'm not -- I haven't looked
25 at this in detail, but it seems like if we did need --.

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1 There's a completely different stakeholder base
2 over in the EV and EV charger space. And to the extent
3 that I've had opportunity to interact with them, which is
4 nowhere near as deeply knowledgeable as your expertise here
5 Commissioner Monahan, but it seems like maybe thinking
6 through what tools we might need to be able to better
7 utilize our authority, or just create a playing field and
8 marketplace that everyone can thrive in and sort of not be
9 too heavy-handed, but sort of figure out what, so how we
10 can ensure that these loads have an opportunity to play in
11 the marketplace, but still not sort of impede what they
12 have to do as manufacturers and service providers, right?
13 And so we'd love to engage in that conversation, and with
14 both you and staff. Because I think probably we can plow a
15 lot of new ground there. And maybe we need -- if we need
16 tools in our toolbox, new ones, we should ask for them.

17 VICE CHAIR GUNDA: Can I just add one thing? I
18 think it's a good example that Commissioner McAllister just
19 raised because of the building codes and standards, and
20 there is kind of like a working group between the
21 Efficiency Division and the EAD in constructing the energy
22 -- on the building electrification side. So I think a
23 similar pathway is what we need to take in what are the
24 analysis that the forecasting and the scenario development
25 would need? What timeframe would that need? What are the

1 other products that are coming in statutorily developed?
2 And how do we integrate them into the process, right? So I
3 think that's the conversation, we just have to have to line
4 them all up in sequence.

5 COMMISSIONER MCALLISTER: One thing just to throw
6 in the mix, in the Load Management Standards and the
7 Flexible Demand Appliance Standards, and all these
8 different proceedings, the value of reliability in terms of
9 like how we actually calculate the benefit. We, in the
10 buildings we use long run, long-run average cost of energy
11 more or less as kind of a proxy for cost-effectively
12 justifying a new building standard over the next 30-plus
13 years. When we talk about these peak benefits and really
14 the sort of load shaping where the real value is a small
15 number of hours, it seems like we probably need to have a
16 methodological conversation at some point about what is the
17 value of load flexibility at those particular moments.

18 And I think we understand qualitatively, but
19 probably and I think -- well, Delphine is not here anymore
20 -- but there we ought to try to put some numbers on that.
21 I'm not sure it's actually totally doable, but we could
22 come up with something I'm pretty sure. So if we could
23 collaborate across divisions and (indiscernible) --

24 VICE CHAIR GUNDA: We should absolutely. And I
25 think it's important, especially given that the CPUC is

1 kind of changing the audit paradigm. For example, how do
2 these resources get valued in that audit paradigm, right?

3 And Commissioner Monahan, I forgot to just
4 mention, I think once we figure out the investment strategy
5 of this \$1.7 billion or so, I think our go-to strategy
6 would be to see which programs that we already have that
7 could just absorb those dollars and enhance their kind of
8 programs. Versus if we really need to create a new
9 program, right?

10 I think if it's a V2G as the investment strategy
11 I think the transportation team is set up to already do
12 that. But we just kind of have to call out what the
13 vision is, given that these dollars are tied to those two
14 key pieces, right? One is the acceleration of the long-
15 term strategy, which V2G and DR plays a very important
16 role. But also we need to kind of do the short-term, what
17 can we show between now and 2025.

18 So the both of them were asked in the
19 Legislature, so we need to figure out how to structure
20 those programs. And once we've set up that money we could
21 talk about a way to and how to use the existing programs.

22 CHAIR HOCHSCHILD: I would just like to offer
23 vigorous endorsement for not duplicating efforts. And
24 where we have existing programs that are successful, just
25 blessing those up. I think that keeps it simpler for

1 everybody.

2 Commissioner Vaccaro, any comments on this?

3 COMMISSIONER VACCARO: I just had probably a
4 really basic question. I appreciated this discussion. I
5 think it's really helpful. And mine is so much more basic
6 than what you all are talking about.

7 So you said something really interesting in the
8 presentation, and it was actually very refreshing. This is
9 not a direct quote, but I kind of tried to write what you
10 said, which is what we have today is inadequate if we want
11 to scale. And that's like just a very direct statement.
12 Sometimes we don't come at it quite that bluntly. And I
13 appreciate that. And I guess what I'm wondering, maybe
14 Commissioner Monahan or Jeffrey, could you just give a
15 couple of examples of what is inadequate? And some
16 thoughts about what adequacy looks like and the path to get
17 there.

18 MR. LU: Yeah. The good news is I think a lot of
19 the pieces are in place for adequacy to come about. I
20 think one of the more important things is because the
21 compensation structures, the rates that don't reflect load
22 flexibility today. We have something like Emergency Load
23 Reduction Program that the PUC has directed, and we have
24 our own Demand Side Grid Support Program. Those are great
25 starts. We're going to need more rate options and other

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1 sort of event-based programs that folks can participate in,
2 so that they actually get the signal to say, "Shift your
3 charging to some other time of day today." That's sort of
4 the regulatory side.

5 On the product side I mean, this industry is
6 still kind of new, it's matured a lot. But I think in
7 terms of actually being able to meld together the energy
8 system with the transportation system, there's a lot of
9 work and a lot of coordination that is still ongoing. And
10 the communication there, like literally the signals being
11 sent over wires is not always the ones that both parties
12 want. So standardizing connectors and communication
13 protocols there I think is extremely important as well.

14 Finally, with the interest in V2G, that's going
15 to require a lot of utility involvement. Utilities are
16 going to have to interconnect V2G chargers, and they don't
17 have an existing process for that right now. It's being
18 done on a one-off basis. Hopefully in the future it's as
19 simple as rooftop PV or even simpler than that.

20 CHAIR HOCHSCHILD: I did have one question just
21 on standardization. We've seen in the charging world this
22 coming together around the J1772 CCS standard, which is
23 great. And I think that represents a simplification of the
24 industry. But just for the V2G, can you speak to some of
25 the standardization challenges and opportunities there that

1 you see?

2 MR. LU: Yeah, so the convergence toward a common
3 connector is a very good first step. However, those
4 connectors can still support different communication
5 protocols. So if the car is speaking one language and the
6 charger speaks another language they still can't
7 communicate. Maybe they can get you a basic charge. But
8 the communication needed for V2G, how much you want
9 discharge, things like reactive power, at what time, at
10 what frequency, those are things that need to be
11 communicated in a uniform method.

12 Right now those uniform methods exist, but are
13 not widely implemented. And so some of the work we're
14 doing is to support that implementation, so that we can
15 have uniform communication.

16 CHAIR HOCHSCHILD: Yeah, I was just wondering if
17 you could share a little bit what else can we the Energy
18 Commission do to support standardization there?

19 MR. LU: Yeah. I'll talk about things we are
20 doing and the things that we are going to do differently,
21 going forward. Things that are going on right now. We
22 funded a company called DEKRA to start a lab in Concord in
23 the East Bay. That's going to help EVSE manufacturers test
24 their conformance to communication protocols. In theory,
25 if everybody passes these conformance tests they should be

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1 able to talk to one another. We're also hosting industry
2 events where EVSE makers and EV makers get together and
3 make sure that their cars and chargers can talk with one
4 another.

5 Going forward, one of the things we're going to
6 do is we're going to actually provide funding, specifically
7 to EVSE manufacturers and other EV networks, so that they
8 can put some money and effort into implementing the
9 standards and making sure that they're tied in with things
10 like MIDAS that we talked about, with things like the
11 Emergency Load Reduction Program.

12 CHAIR HOCHSCHILD: Super helpful. Yeah, I would
13 just emphasize again it is cheaper, smoother, faster,
14 better, the sooner this happens. And rougher, slower,
15 tougher, the later it happens. So thank you for that. And
16 I just want to emphasize again, we're going to be releasing
17 -- we expect to release next week, the third quarter ZEV
18 sales numbers. But we are today, in California, almost
19 1,000 electric vehicles a day being added to the roads in
20 California. And virtually none of those are connecting to
21 V2G and the grid needs it.

22 And I do agree with Commissioner Monahan the
23 school bus case is particularly exciting. The duty cycle
24 of those vehicles, and the size of those batteries are
25 particularly compelling as an opportunity, but I think we

1 got to get smart and make use of all these batteries on
2 four wheels.

3 And Drew, correct me if I'm misremembering this,
4 this is a statistic that you worked up. But if you were to
5 connect all million electric vehicles that have been sold
6 in the state, to V2G we would have four hours of 10
7 gigawatts of capacity. Is that correct?

8 MR. BOHAN: I think the figure is if we had a
9 million BEVs that they would be able to discharge for more
10 than four hours 10 gigawatts into the system. That's if
11 every single one of them connected, which of course would
12 never happen, but for a thought experiment that's a good
13 scale.

14 CHAIR HOCHSCHILD: It's a great kind of
15 theoretical universal possibility to think about.

16 Well thank you so much. They can, of course,
17 these vehicles can do double-duty, because as the Vice
18 Chair has pointed out it's really only like 30 to 60 hours
19 a year that we're worried about good reliability, and the
20 rest of time we focus on being a good vehicle.

21 So okay, are there other comments or questions or
22 dialogue around this? If not, Jeffrey thank you so much.
23 That was a terrific presentation. I appreciate all your
24 work.

25 All right, we will turn now to Item 7, Emergency

1 Rulemaking for Assembly Bill 205 Opt-in Certification
2 Provisions. And I believe Eric is going to join us
3 virtually.

4 Yeah, hi Eric, go ahead.

5 MR. KNIGHT: Hello, Chair and Commissioners. My
6 name is Eric Knight. I am the manager in the Siting and
7 Environmental Branch of the Siting, Transmission, and
8 Environmental Protection, which I'll refer to as "STEP."
9 I'm presenting a proposed resolution to adopt emergency
10 regulations for implementing the Opt-in Certification
11 program, which was established by Assembly Bill 205, which
12 was signed into law on June 30th of this year.

13 In just three months' time, Chief Counsel's
14 Office and staff in STEP worked collaboratively to
15 implement three key components of AB 205: the Opt-in
16 certification, the coordination of Opt-in certification
17 with three key state agencies, and the certification
18 program for Department of Water Resources facilities, which
19 will be proposed as part of the Strategic Reliability
20 Reserve, which Dave Erne spoke about earlier today.

21 And then also over the summer, STEP and Chief
22 Counsel's staff worked to finalize the proposed amendments
23 to the small power plant exemption regulations to
24 streamline that process.

25 Chief Counsel's Office staff will present the

1 other programs from AB 205 and the SPPE regulations, and I
2 will present the substance of the Opt-in certification
3 program contained in the regulations package before you for
4 adoption today. And before I launch into the next slide,
5 I'd just like to thank Linda Barrera and Kristen Driskell
6 from the Chief Counsel's Office for their significant
7 contributions to this program, their positive efforts, and
8 their leadership. So next slide, please.

9 To accelerate the state's transition to renewable
10 energy, and to maintain electrical system reliability under
11 this transition and during extreme climate-change-driven
12 events, staff is seeking your approval of a proposed
13 resolution to adopt emergency regulations to implement a
14 new optional or "opt-in" certification program for certain
15 energy generation and storage and related manufacturing
16 facilities. This opt-in certification program is found in
17 Chapter 6.2, Division 15, of the Public Resources Code, and
18 is the first significant change to the CEC's licensing
19 authority in over 45 years.

20 The proposed emergency regulations will ensure
21 that opt-in applications submitted to the CEC are reviewed
22 in a timely and consistent manner, ensure the public
23 transparency of the CEC's process, and that public
24 participation is maximized, and ensure the environmental
25 review of these projects is rigorous and comprehensive.

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1 Next slide, please.

2 The opt-in certification program is limited to
3 solar photovoltaic, terrestrial wind, and non-fossil, non-
4 nuclear, thermal power plants of 50 megawatts or more,
5 energy storage systems of at least 200 megawatt hours, and
6 the transmission lines connecting these facilities to the
7 transmission grid. And facilities that manufacture or
8 assemble renewable energy / energy storage systems or
9 components, with at least a \$250 million investment. The
10 program will be in effect until June 30th, 2029.

11 Under this program, a certificate or license by
12 the CEC is in lieu of any other permit except that the
13 CEC's permitting authority does not supersede the authority
14 of the State Lands Commission, the California Coastal
15 Commission, the San Francisco Bay Conservation and
16 Development Commission, and the State Water Resources
17 Control Board, or the applicable regional water quality
18 control boards. And in the case of manufacturing
19 facilities, CEC's authority would not supersede the local
20 air quality management districts or the Department of Toxic
21 Substances Control.

22 Hank Crook from Chief Counsel's Office will
23 discuss the coordination plans or MOUs that CEC staff has
24 developed as required by AB 205, with the California
25 Department of Fish and Wildlife, Toxic Substances Control,

1 and the State Water Board, and regional boards, which are
2 intended to ensure effective and timely participation by
3 these agencies in the review of opt-in projects. Next
4 slide, please.

5 The Public Resources Code provides the framework
6 and timelines for the Opt-in certification process. Key
7 takeaways from this slide are early engagement with
8 interested and trustee agencies and California Native
9 American tribes, multiple public meetings, a 60-day public
10 comment period on the Draft Environmental Impact Report for
11 the project. And a decision by the CEC on whether to
12 certify the EIR and issue a certificate or license within
13 270 days of receiving a complete application. As well as
14 decisions by other agencies that retain their permitting
15 authority if they are applicable within 90 days of the CEC
16 certifying the EIR. Next slide, please.

17 As I said, the Public Resources Code already
18 contains most of the procedures for the CEC's review and
19 consideration of an opt-in application, including
20 timeframes, contents of the applications, and the CEC's
21 Environmental Impact Report, as well as findings that must
22 be made by the CEC to approve an application. Staff has
23 proposed regulations that fill a few gaps and provide
24 clarity. In the interest of time, I won't discuss each
25 proposed regulation, but I'd like to highlight a few.

1 Proposed section 1876.5 mandates a pre-filing
2 meeting at least 30 days prior to the submittal of an
3 application, including a requirement that CEC staff must
4 invite the affected local government or governments to
5 attend. Staff may also invite state or federal agencies as
6 appropriate. Because of the accelerated timeline for the
7 CEC to reach a decision on the application, it is important
8 for CEC staff and the applicant to understand any issues as
9 soon as possible. And for CEC staff to provide project
10 specific guidance to the applicant on the informational
11 needs for the project.

12 Proposed section 1878.5 covers tribal engagement.
13 The California Environmental Quality Act, or CEQA, already
14 sets forth the requirements for consultation with tribes.
15 AB 205 and these regulations do not change the requirements
16 in CEQA. But new statutory language provides additional
17 requirements on the CEC regarding tribal consultation, so
18 the proposed regulatory language cites to the statute,
19 which is Public Resources Code section 25545.7.4. The
20 regulations also make it clear that the CEC can engage
21 tribes even earlier than set forth in the Public Resources
22 Code.

23 The planning for proposed section 1880 covers
24 public outreach, which is an important part of the opt-in
25 program. The Public Resources Code contains specific

1 details on the number of public events near the project
2 site that are to be held, thus section 1880 references the
3 statute. The regulatory language requires meeting sites
4 with online meeting capabilities to facilitate maximum
5 public and stakeholder participation. Next slide, please.

6 As part of the emergency rulemaking process,
7 staff held informal meetings with stakeholders including
8 energy developers and local government and state agency
9 representatives. Staff, along with the CEC's Tribal
10 Liaison, had consultation meetings with interested
11 California Native American tribes.

12 On September 19th staff held a public workshop on
13 the draft emergency regulations, which was attended by over
14 150 individuals. Oral comments were made by a broad
15 spectrum of the attendees, and a total of 10 letters were
16 filed following the workshop in the proceeding docket.

17 Staff appreciates the robust stakeholder engagement and the
18 thoughtful comments received. Staff has made changes to
19 the proposed emergency regulations based on these comments
20 where we believed it was appropriate. In some instances,
21 the concerns raised are addressed by existing statutes or
22 regulations, making changes to the regulations unnecessary.
23 Next slide, please. The next slide, thank you.

24 So in conclusion, staff requests your approval of
25 Resolution No. 22-1012-7, adopting sections 1875-1882 of

1 the California Code of Regulations, Title 20, Article 4.1.
2 And finding that adoption of these regulations is not a
3 project under CEQA, or any alternative is exempt from CEQA.

4 This completes my presentation. Thank you

5 CHAIR HOCHSCHILD: Thank you.

6 We'll go now to public comment on Item 7.

7 MS. MURIMI: Thank you, Chair.

8 For individuals that are in the room, go ahead
9 and use the QR codes located in the back of the room to
10 indicate that you'd like to make a comment. For those on
11 Zoom, go ahead and use the raise-hand feature. It looks
12 like an open palm at the bottom of your screen. And for
13 those calling in go ahead and press *9 to indicate that
14 you'd like to make a comment. Once called on, please state
15 and spell your name, give your affiliation if any.

16 So going on to Zoom we have individual marked as
17 "Call-in User 2."

18 MR. UHLER: Hello, Commissioners. It's Steve
19 Uhler, U-H-L-E-R. A couple of things come to mind
20 particularly since this has been a heavily data-oriented
21 type of meeting, is what do you think the effects of not --
22 the Commission not taking up what is called "data
23 modernization" in the 90s, which all of that --

24 CHAIR HOCHSCHILD: Sorry, Mr. Uhler, if your
25 comments are not germane to Item 7 I will ask you to

1 (indiscernible).

2 MR. UHLER: Well, they're germane.

3 CHAIR HOCHSCHILD: You can speak to that at the
4 public comment period at the end of the meeting, but this
5 is for public comment that is germane to Item 7.

6 MR. UHLER: Okay. I will be very germane, Chair.
7 Your resolution is not in the docket. Is it going to be a
8 standard procedure to ignore Title 20 12088, and vote on
9 things that you have not connected to an agenda item
10 through a proceeding? And I would like to thank your legal
11 staff for confirming that your load management one, which
12 is why I'm asking this question now -- and are you going to
13 continue to vote on things that have not been deemed record
14 for the proceeding? I say you table this. I understand
15 it's an emergency. I would like to know -- I would like to
16 see you be actively discuss the situation on how to prevent
17 this emergency for better use of data. That's how it's
18 germane. That's how data is germane to this.

19 So I'm after the truth. Do I go look all over
20 your website? And oh, you happen have a meeting page. But
21 according to Title 20, nothing on that page is a record for
22 the proceeding. Please consider that. All I ask is you
23 correct that and you correct it for the next couple of
24 items that you're going to take action on, which the public
25 has a right to take anything that you consider and take

1 action on. And you appear to be taking action on even
2 items that you call agenda items, or information items.

3 So please give me a reason to not continue to go
4 on 8 and 0 for the same condition, and I won't bother with
5 you -- with this again. Thank you.

6 MS. BARRERA: This is Linda Barrera, Chief
7 Counsel with the Energy Commission, Mr. Uhler. Thank you
8 for your comments.

9 I just want to direct you to our website. We
10 posted both the agenda for this meeting 10 days before the
11 Business Meeting. And the backup materials on the CEC
12 website for the Business Meeting includes the resolution
13 and all the documentations for this rulemaking.

14 In addition, the docket and the website for the
15 opt-in rulemaking includes all the rulemaking materials,
16 including the Express Terms and the Notice of Emergency.
17 And we also filed the Business Meeting Agenda notifying the
18 public of what the Commission was going to consider for
19 potential adoption.

20 I'm happy also to have our office follow up with
21 you to guide you through our website. And I know that
22 you're also receiving these documents through the Service
23 List for this rulemaking.

24 MS. MURIMI: Thank you, Linda.

25 And concluding public -- that concludes public

1 comment. Chair, I hand the mic back to you.

2 CHAIR HOCHSCHILD: Thank you. Let's go to
3 Commissioner discussion, starting with Commissioner
4 Vaccaro.

5 COMMISSIONER VACCARO: Thank you, Chair
6 Hochschild.

7 So Eric, thanks so much and I'm looking off this
8 way. I don't know which way to look right now. I thank
9 you so much for that really solid presentation. I really
10 appreciate that you recognized your CCO counterparts.

11 From my vantage point, what we have today shows
12 great work and great partnership by both the STEP team and
13 the CCO teams in moving swiftly and diligently to meet the
14 moment, you know, of really trying to get renewable energy
15 infrastructure, clean energy infrastructure on the ground
16 quickly. And I think these regulations reflect the
17 attention to moving swiftly, but also that focus on detail.
18 And I think that's been really important here. Nothing's
19 been compromised in this swift action process. And you
20 emphasized a few points. And I just want to underscore
21 them.

22 Eric, one of the things that you mentioned was
23 the public outreach and engagement, which I think was
24 incredible here. It wasn't just the public workshop, which
25 I attended. I participated in meetings with STEP staff,

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1 where we followed up on some of the comments that we
2 received at the public workshop. I think what that did is
3 it enabled my office, as well as staff, to develop new
4 relationships, and ones that we didn't have before. We
5 have some better perspective, better tribal perspective, as
6 well as perspective from local governments.

7 And in fact, we were able to take some of the
8 early feedback and build it into the regulations. And I
9 think you really see that in language that requires
10 mandatory pre-filing meetings, and a commitment by the
11 Energy Commission to invite local governments and
12 applicable federal government entities to engage early.
13 That's something that we think is going to allow for
14 integrity of the process as we move forward.

15 Another thing that is really important is we're
16 not compromising on CEQA. That's something that's been, I
17 think, misunderstood. We have an obligation to fully
18 comply with CEQA. Indeed, that will be an environmental
19 impact report that gets prepared in this process, and no
20 circumvention, no abridgement of CEQA requirements. And
21 that includes no abridgement of the meaningful Tribal
22 Consultation requirements that are already built in to the
23 law.

24 I think one other thing that didn't come out, I
25 think maybe in a way that everybody understands, is there's

1 some really important findings the Commission has to make
2 as well. So while it is a 270 day review and action on an
3 application by the Commission, certain very specific
4 findings have to be made. I'll just highlight a few.

5 There has to be an overall net positive economic
6 benefit to the local jurisdiction that would otherwise have
7 had permitting jurisdiction. That's a finding the
8 Commission has to make.

9 Commission also has to make a finding that the
10 applicant has entered into one or more community benefits
11 agreements that benefit the local community or the region.
12 That's important as well.

13 And so I just want to emphasize those points,
14 because those are heightened provisions, in addition to
15 heightened labor provisions that you typically don't see in
16 our siting certification process. So while it's a swift
17 process, there's a lot in there to ensure that local
18 communities and Californians more generally benefit from
19 this expedited process.

20 So I fully support this. And just again, want to
21 thank the team, and the partnership, and we'll talk about
22 the plans in a moment. But the plans are a really
23 important aspect of this. Well, that's another item,
24 really that that partnership with Fish and Wildlife, and
25 other state agencies for how some of these things are going

1 to be implemented. So thank you, staff. And thank you to
2 the stakeholders, and tribes who made this process better
3 by offering candor and calling us out when you felt like we
4 didn't understand things or get it quite right.

5 CHAIR HOCHSCHILD: Thank you.

6 Okay, unless there are other -- I mean, I did --
7 oh, do you want to make some comment?

8 VICE CHAIR GUNDA: Just a quick one.

9 CHAIR HOCHSCHILD: Yeah, go ahead.

10 VICE CHAIR GUNDA: Yeah, I think I just wanted to
11 say thanks to Eric for the presentation and also providing
12 briefings, I'm going to look at you here. Just kind of
13 thanks for the briefing and also kind of a enumerating some
14 of the concerns that were raised by different parties and
15 how we are addressing them. So it was really helpful
16 briefing and also helping me understand where some of the
17 concerns might have been misunderstandings and such. So
18 thank you for that.

19 And Commissioner Vaccaro, thank you for your
20 leadership on this. You know, I think as we go towards SB
21 100 I think it's important that we build at a sustained,
22 steady rate and accelerate the build rate. So, to the
23 extent that this is an important tool for us, thank you so
24 much for your leadership, and Eric and CCO for your work.
25 Thanks.

1 CHAIR HOCHSCHILD: I was just going to say, you
2 know Eric, we're still getting used to this virtual setup.
3 And when you present remotely you're kind of on surround
4 sound. You're in this giant screen behind us. You're up
5 on each ceiling. And you're in front of the screen. So
6 it's Eric Knight surround sound.

7 I did also want to add my thanks to you and the
8 team, and to Commissioner Vaccaro for all the hard work.
9 You know, this was a landmark year, a landmark year for our
10 budget, for this incredible package of climate policies.
11 And for whole new industries we're lifting up including
12 long duration storage, which we'll get to later in the
13 agenda. But the permitting changes were one of the most
14 significant steps forward. And I just want to highlight
15 how big a deal that was.

16 In fact, I was with the Governor at the signing
17 ceremony for this package of climate bills. He
18 specifically called that out. He knows how significant it
19 is and how much we have to get permitting right to be
20 successful in our climate goals. And I really just want to
21 thank you for all your hard work. I know you and your team
22 have put in many, many, many hours into this, Commissioner.
23 So I just wanted to recognize that incredible work and I'm
24 happy to support this this item.

25 Unless there are other comments. I'd welcome a

1 motion from Commissioner Vaccaro.

2 COMMISSIONER VACCARO: Yes, I move approval of
3 Item 7.

4 CHAIR HOCHSCHILD: Is there a second,
5 Commissioner Monahan?

6 COMMISSIONER MONAHAN: I second.

7 CHAIR HOCHSCHILD: All in favor say aye.
8 Commissioner Vaccaro?

9 COMMISSIONER VACCARO: Aye.

10 CHAIR HOCHSCHILD: Commissioner Monahan.

11 COMMISSIONER MONAHAN: Aye.

12 CHAIR HOCHSCHILD: Commissioner McAllister?

13 COMMISSIONER MCALLISTER: Aye.

14 CHAIR HOCHSCHILD: Vice Chair Gunda?

15 VICE CHAIR GUNDA: Aye.

16 CHAIR HOCHSCHILD: And I vote aye as well. Item
17 7 passes unanimously. Thank you, Eric. Thank you, team.

18 MR. KNIGHT: Thank you.

19 CHAIR HOCHSCHILD: We appreciate it.

20 We'll turn now to Item 8, Information Item on
21 Interagency Plans under AB 205's Opt-in Permitting Program.

22 MR. CROOK: Hello, Chair and Commissioners. I'm
23 Hank Crook. I'm an attorney in the Chief Counsel's Office
24 and I'm here to provide you with information about the
25 Energy Commission's Interagency Coordination Plans for the

1 Opt-in Permitting Program. Next slide, please.

2 The interagency coordination plans benefit
3 Californians by streamlining interagency review of opt-in
4 program applications. Ensuring interagency collaboration
5 during the opt-in permitting process. And by expediting
6 permitting of renewable energy generation, energy storage,
7 and related manufacturing facilities. Next slide, please.

8 As noted during the prior agenda item, Assembly
9 Bill 205 established the Energy Commission's new opt-in
10 permitting program. Within 90 days of AB 205's effective
11 date, the Energy Commission was required to develop plans
12 with the California Department of Fish and Wildlife, the
13 State Water Resources Control Board, and Department of
14 Toxic Substances Control to ensure timely and effective
15 consultation during the opt-in permitting process.

16 Over a three-month period, the Energy Commission
17 engaged in a collaborative interagency effort with these
18 partner agencies to develop opt-in coordination plans.

19 In addition to weekly internal meetings, the
20 Energy Commission met with each partner agency several
21 times. And the agencies exchanged numerous drafts, emails,
22 and phone calls during the process.

23 The Energy Commission's partner agencies
24 contributed to the substance of each plan, understand the
25 opt-in program's expedited timeline, and agree on the

1 importance of interagency collaboration throughout the opt-
2 in permitting process. Next slide, please.

3 I am happy to report that all agreements were
4 executed on time. And as a quick summary, the Opt-in
5 Coordination Plans address the unique interagency
6 relationships under the opt-in permitting program.
7 Establish frameworks for interagency consultation during
8 the opt-in permitting process. And ensure partner agency
9 input is considered in the Energy Commission's development
10 of an Environmental Impact Report and Conditions of
11 Certification for an opt-in program, or an opt-in project,
12 excuse me.

13 We have included the plans as backup materials
14 for this agenda item and will make the attachments to the
15 plans available upon request. This concludes my
16 presentation. I am happy to answer any questions you may
17 have about the interagency coordination plans for the opt-
18 in program. Thank you.

19 CHAIR HOCHSCHILD: Thank you, Hank. And I
20 understand this your first time presenting --

21 MR. COOK: It is.

22 CHAIR HOCHSCHILD: -- for the Commission? Well,
23 a job well done and thank you.

24 MR. COOK: Thank you.

25 CHAIR HOCHSCHILD: Welcome to the podium. With

1 that we'll go to -- actually, we're not going to do public
2 comment on this, correct, as this is an informational item.

3 So let's go to discussion starting with
4 Commissioner or Vice Chair Gunda, do you want to start us
5 off on this? Sorry, who's this this? Sorry, who's this --
6 Commissioner Vaccaro. Sorry, so sorry, yes. Thank you.
7 Commissioner Vaccaro, please go ahead. Yes.

8 COMMISSIONER VACCARO: Yeah. Well, thanks, Hank.
9 I'm glad that the Chair acknowledged that this is not only
10 your first meeting, but you're new to the Commission, new
11 to the Chief Counsel's Office, and you were able to really
12 hit the ground running on a really important set of
13 documents to allow us to implement the opt-in legislation.
14 So thanks to you.

15 And again, I don't think I can thank the CCO and
16 STEP teams enough for their work in this space. They truly
17 showed the leadership for this. This wasn't Commissioner
18 Office leadership in the development of the plans. It was
19 really those two offices coming together very well. And
20 then meeting our interagency colleagues to do very
21 impressive work. These are thorough, they are tailored to
22 ensure rigorous review. And to meet the objectives of the
23 legislation when I think this should allow us to seamlessly
24 and quickly move forward with the directives given to us.
25 So commendable work, and thanks again to this to our state

1 agency partners. But again, most importantly, CCO team and
2 STEP team.

3 CHAIR HOCHSCHILD: Any other questions or
4 comments on that?

5 Thank you, Hank. I appreciate it.

6 MR. COOK: Thank you very much.

7 CHAIR HOCHSCHILD: Okay. We'll turn now to Item
8 9, Emergency Rulemaking For AB 205/209 Certification For
9 Department of Water Resources Facilities. Kari Anderson.

10 MS. ANDERSON: Thank you and good afternoon,
11 Chair and Commissioners. My name is Kari Anderson, and I
12 am an attorney in the Chief Counsel's Office. I am pleased
13 to present this portion of the Strategic Reliability
14 Reserve program to the commission and to recommend the
15 commission vote to adopt the proposed regulations package.
16 Next slide, please.

17 As Eric Knight and others have described, the
18 Strategic Reliability Reserve Program in AB 205 is
19 California's effort to maintain electricity reliability in
20 the face of recent and future extreme events. One portion
21 of that effort is the Department of Water Resource's
22 development of backup energy generation capacity for use
23 during summer peak load and extreme events.

24 The CEC's role in the development of this backup
25 capacity is to certify those DWR facilities using these

1 proposed procedures. The benefits of the procedural
2 regulations are to provide expedited review and thorough
3 environmental evaluation when certifying these needed
4 resources. Next slide, please.

5 Although CEC is to adopt expedited procedures, AB
6 205 determines most of the program requirements, including
7 the four types of facilities DWR may develop summarized on
8 this slide. I am not going to read this slide, but would
9 like to highlight that the new facilities cannot use diesel
10 fuel after July 31, 2023. And that new storage or zero
11 emission facilities have to be operational by the end of
12 2024. Also, the CEC's licenses are valid for five years.
13 Next slide, please.

14 Presented today for your approval are the
15 expedited procedures for reviewing DWRs facility
16 application. The statute requires the process to be
17 concluded within 180 days. This expedited process begins
18 with a pre-filing meeting between DWR, CEC and affected
19 public agencies.

20 After a pre-filing meeting, DWR will file the
21 application. CEC will notify affiliated Native American
22 Tribes of the application and consultation may begin.

23 Staff has 20 days per the statute to review and
24 ask for information from DWR. The procedures allow 30 days
25 for DWR to provide the information, and 5 days for staff to

1 accept the information that's submitted or ask for further
2 information. Next slide, please.

3 This slide shows the topics of information to be
4 collected as part of the application. These requirements
5 are in the Appendix SRR, which is before you for adoption.
6 As you can see, the breadth of information required ensures
7 a thorough environmental assessment. Next slide, please.

8 Once deemed complete, the application is provided
9 to agencies who may respond within 30 days. And if they do
10 staff will meet with them, because the statute requires
11 compliance with all existing laws those agencies would
12 enforce if it weren't for this program. After tribal
13 consultation concludes, staff will publish a Preliminary
14 Staff Assessment and it will be available for public
15 comment for 60 days. After the public comment period,
16 staff will develop a Final Staff Analysis.

17 The regulations also have procedures for
18 termination or withdrawal of an application before a
19 complete analysis has been performed. Next slide, please.

20 The document the Commission will be presented
21 with is a Final Staff Analysis or FSA. The FSA will be
22 published. It will contain the impacts analysis, including
23 mitigation, other findings required in the statute, and
24 will respond to issues raised in the comment period. Staff
25 will make a recommendation on the application. The

1 Commission may grant the certification, deny the
2 application, or take such other action it deems appropriate
3 within 45 days of the publication of the FSA. Next slide,
4 please.

5 Prior to presenting these proposed regulations
6 for your adoption, staff held a duly noticed public
7 workshop on September 30, took written comments through
8 October 3, and held a tribal listening session on October
9 3. We had over 50 participants in the workshop and
10 received some clarifying questions, but no written comments
11 or suggestions for modification. Next slide, please.

12 Staff is recommending the Commission approve the
13 resolution finding the regulations are exempt from CEQA and
14 adopting the proposed regulations in Article 4.2 of Title
15 20 of the California Code of Regulations. As directed in
16 statute in AB 205, these will be filed using the emergency
17 regulation procedures in the APA. Staff and I are
18 available for questions, but our staff is at home. So that
19 concludes my presentation.

20 CHAIR HOCHSCHILD: Okay, thank you so much.

21 We'll go now to public comment on Item 9.

22 MS. MURIMI: Thank you, Chair.

23 Once again for individuals that are in the room,
24 go ahead and use the QR codes located in the back of the
25 room. For individuals that are on Zoom, go ahead and use

1 the raise-hand feature. It looks like an open palm at the
2 bottom of your screen. And for those calling in, go ahead
3 and press *9 to indicate that you'd like to make a comment.

4 Again, this is public comment for Item 9. We
5 have "Call-in User 2."

6 MR. UHLER: Hello, Commissioners. This is Steve
7 Uhler. It appears Chair that once again you're going to be
8 voting on an item that you've yet to deem a record for the
9 proceeding. Your legal staff have used a lot of words, but
10 have not addressed why they do not publish those in the
11 docket. Your Chief Counsel appears to believe that I am
12 receiving a mail list or listserv information. That has
13 not happened and she might want to check the records as I
14 long ago abandoned that system.

15 So are you going to now and in the future,
16 proceed to adopt something that is not a record for the
17 proceeding? Can I -- will I also have to give up on Title
18 20 1208(a) as my means of knowing that you're going to talk
19 about something that is the true document, not a document
20 that's elsewhere in an uncontrolled situation on the
21 website. And I'm talking the control difference between
22 the dockets, which is a long ways from what you put on the
23 website. Because that system, I can actually pull down the
24 first copy of it, come back days later, and you've updated
25 it from the same URL. Now, if I don't bother to pull up

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1 just before the meeting, I'm left out to find out that
2 you're not going to do something, or whatever.

3 So please, all I'm asking is it goes in the
4 docket. They're publishing exemption memos. They're
5 publishing presentations. And it goes into the docket for
6 the item, not the business meeting. Because now we have to
7 dig around and wonder, you know, which one goes with which.
8 It needs to go into the docket, so please do that. That's
9 all I'm asking.

10 Public doesn't have much chance to talk at your
11 meetings. You talk about a lot of agenda items, so I'm
12 definitely going to use items like this for you to correct
13 and follow your own regulations. Please do that. And
14 please confirm you will do that.

15 I still have public comment to go and I guess
16 another item that you're going to take action on. Is
17 really anything you take action on, is the public must be
18 able to comment on. So please let me know, because I'm
19 going to continue to do this. I don't even see anybody
20 making an effort to pop them up on the website.

21 Okay, do you understand? I believe you should
22 know what your mind says about that. And what the Bagley-
23 Keene says about what you should do in answering my
24 questions. Thank you.

25 MS. BARRERA: Chair, may I address that

1 commenter?

2 Hi, Mr. Uhler. This is Linda data again with the
3 Chief Counsel's Office. I really appreciate your comments.
4 I have myself -- I'm looking at both the dockets for the
5 opt-in rulemaking and the DWR certification permitting
6 program. And I'm looking at it right now and I can assure
7 you that notice of the business meeting --

8 VICE CHAIR GUNDA: Would it be possible to pull
9 it up on the on the screen, the docket?

10 MS. BARRERA: I'm not able to show? I guess I
11 can, but I can also provide the number of the of the
12 docket, and Mr. Uhler is familiar with our docket system.
13 So I will proceed to give him that docket number. It's
14 2020 -- 22-OIR-02. And you'll see that notice of this
15 business meeting with the rulemaking materials was posted
16 on October 3, 2022.

17 MS. MURIMI: There are no more comments in the
18 room, and no more common commenters on Zoom
19 (indiscernible).

20 CHAIR HOCHSCHILD: Okay, let's go to Commissioner
21 discussion starting with Commissioner Vaccaro.

22 COMMISSIONER VACCARO: Thank you. So Kari,
23 you're one of our newer attorneys as well, an experienced
24 attorney, but one of our newer attorneys, so very well
25 done. I've had the opportunity to work with you in the

1 development of this rulemaking along with your CCO
2 counterparts, and STEP staff. So I think everything I said
3 for Item 7 is equally applicable here. I think it's always
4 worth saying the thanks again and recognizing the work of
5 the legal team and the staff team in quickly working
6 through this.

7 One of the really important facets of this
8 rulemaking is that you did it collaboratively as well with
9 Department of Water Resource colleagues. And I think we've
10 been able to forge a very good relationship with them
11 starting even before an emergency proclamation that was
12 issued, not in the in the recent past. But that really I
13 think set the relationship of respect, of trust, and the
14 ability to work through different perspectives quickly. I
15 saw that happen here as well.

16 And so again, not going to be labor the points
17 that I already made, but I think this is well done. I
18 support approval of this item.

19 CHAIR HOCHSCHILD: Vice Chair Gunda?

20 VICE CHAIR GUNDA: Thank you, Chair.

21 I just wanted to do a collective in the last
22 three items -- 7, 8, and 9 -- just a collective thank you.
23 Again, just for the work. I mean, I was on the sidelines
24 on this particular element of the 205. But really I
25 watched from the sidelines how much the CCO, Commissioner

1 Vaccaro, has worked on making this happen, all these
2 elements. And since then, you know, all the implementation
3 parts of it.

4 Kari, it was a pleasure to meet you in the
5 briefings and appreciated your work. And Hank, nice to
6 meet you as well and welcome on board. I look forward to
7 supporting this item. Thank you.

8 CHAIR HOCHSCHILD: Thank you. I'd echo all
9 those. Unless there are other comments, I'd welcome a
10 motion from Commissioner Vaccaro on Item 9.

11 MS. BARRERA: If I may? I just -- sorry to
12 interrupt.

13 CHAIR HOCHSCHILD: Yeah.

14 MS. BARRERA: I got additional information I
15 would like to share with the public that our rulemaking
16 materials and notice of this agenda item was also sent to
17 about 11 different service lists. Those are thousands of
18 people. And more specifically, this notice of this agenda
19 item was sent to all of our siting, like the big service
20 liaison that sends the information to on all siting matters
21 to the public. And to two different general rulemaking
22 service lists.

23 So in addition of being posted on our website, it
24 also was sent to various service lists to the general
25 public. So I hope that that helps answer Mr. Uhler's

1 question.

2

3 CHAIR HOCHSCHILD: Thank you. I'd welcome a
4 motion on Item 9 from Commissioner Vaccaro.

5 COMMISSIONER VACCARO: Yes, I move approval of
6 Item 9.

7 CHAIR HOCHSCHILD: Is there a second from Vice
8 Chair?

9 VICE CHAIR GUNDA: I second Item 9.

10 CHAIR HOCHSCHILD: All in favor say aye,
11 Commissioner Vaccaro?

12 COMMISSIONER VACCARO: Aye.

13 CHAIR HOCHSCHILD: Vice Chair Gunda?

14 VICE CHAIR GUNDA: Aye.

15 CHAIR HOCHSCHILD: Commissioner McAllister?

16 COMMISSIONER MCALLISTER: Aye.

17 CHAIR HOCHSCHILD: Commissioner Monahan?

18 COMMISSIONER MONAHAN: Aye.

19 CHAIR HOCHSCHILD: And I vote aye as well. Item
20 9 passed unanimously.

21 We'll turn now to Item 10, Amendments to the
22 Small Powerplant Exemption SPPE Regulations.

23 MR. BABULA: Okay, let me make sure people can
24 hear me. I had an issue in practice. Okay, now for the
25 main event.

1 Good afternoon, Commission. My name is Jared
2 Babula, Senior Attorney in the --

3 CHAIR HOCHSCHILD: Hey, Jared can you raise the
4 mic little bit? It's a little bit hard to hear you. Is
5 there a way to --

6 MR. BABULA: I have a plan for that. There we
7 go.

8 CHAIR HOCHSCHILD: There we go.

9 MR. BABULA: Once again, so my name is Jared
10 Babula, Senior Attorney in the Chief Counsel's Office. And
11 I will be presenting the amendments to the Small Power
12 Plant Exemption Regulations for your consideration. Next
13 slide.

14 The benefits of the proposed regulatory changes
15 include:

16 Reducing administrative procedures by eliminating
17 evidentiary hearings and other unnecessary requirements
18 that currently apply to SPPEs. This is the most
19 significant proposed change of this rulemaking. This
20 streamlines CEC review and expedites the ability for a
21 small power plant, 100 megawatts or less, to be considered
22 by the local permitting authority.

23 Updating 1970s era language that created an
24 adjudicatory process, not required in statute, which
25 primarily was used to address the need of utility owned

1 projects, an issue no longer adjudicated by the CEC in
2 powerplant siting cases.

3 And finally, improving transparency. By updating
4 the required informational contents of the SPPE
5 application, the public and stakeholders will be provided
6 with more detailed information about the project and its
7 impacts at the beginning of the review process, allowing
8 for more effective engagement. Next Slide

9 The Warren-Alquist Act provides that if certain
10 requirements are met, the CEC may exempt from its
11 jurisdiction thermal powerplants up to 100 megawatts. It
12 is important to note that approval of the exemption is not
13 approval of the project. The project owner would still
14 have to obtain required authorization and permits from the
15 relevant local authorities. Next Slide

16 The current SPPE process includes two procedural
17 steps. Staff performs an environmental analysis under the
18 California Environmental Quality Act, which results in an
19 environmental document such as a mitigated negative
20 declaration or a draft and final Environmental Impact
21 Report. Then an evidentiary process occurs in which a
22 committee holds evidentiary hearings and issues a proposed
23 decision. And finally the CEC issues a final decision.

24 To update and modernize the process to reflect
25 changes in energy markets, and the fact that the CEC no

1 longer determines the need for a specific generating
2 facility, staff is proposing through this rulemaking the
3 elimination of the evidentiary process, a component that
4 has been in place for decades.

5 To be clear, what is not being changed is CEQA
6 and its requirements related to public noticing, public
7 comment periods, responses to comments and requirements to
8 consult and engage tribes.

9 Staff is also proposing to repeal Appendix F,
10 which serves as the information requirements of the SPPE
11 application and to update Appendix B, to comport with
12 changes in CEQA, which is currently the information
13 requirements for an application for certification and apply
14 Appendix B to SPPE applications. Next Slide

15 Staff recommends the Commission approve the
16 resolution finding the adoption of the regulations not a
17 project under CEQA or alternatively exempt, and adopting
18 the amendments to the SPPE Regulations contained in Title
19 20. This concludes my presentation. I'm available to
20 answer any questions.

21 CHAIR HOCHSCHILD: Thank you.

22 We'll get to public comment at this time on Item
23 10.

24 MS. MURIMI: Thank you, Chair. Once again, for
25 individuals that are in the room, go ahead and use the QR

1 codes located in the back of the room. And for individuals
2 on Zoom, use the raise-hand feature. It looks like an open
3 column at the bottom of your screen. And for those calling
4 in press *9. We have "Call-in User 2."

5 MR. UHLER: Hello, Commissioners. Steve Uhler.
6 Sorry to have to do this again, but your Counsel came back
7 and said something that makes me believe that I'm not
8 getting my point across. It's simple. You have a rule, a
9 regulation, the force of law. It's an enactment, Title 20
10 1208(a) that if you want a document or a writing or a
11 record, to be considered a record for the proceeding, it
12 has to be filed through the docket. And what's the
13 trouble? Why do you maintain a separate system? And then
14 try to connect it through an agenda? Does that mean if you
15 write something on the agenda, you can connect to the
16 entire world? That's -- it seems to be a very large
17 procedural innovation, that just placing an agenda in a
18 docket means that everything that's on that meeting page is
19 the factual real and never changed, and never superseded
20 document. That doesn't happen.

21 So I have not heard your counsel say that those
22 docket documents on the meeting page that she's suggesting
23 that I go to, are a record for the proceeding. So you will
24 appear to continuously even under objection, vote for items
25 that you have not taken the time to make a record for the

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1 proceeding. You can talk about your list servers, and so
2 on and so forth. Docket's pretty damn reliable.

3 MS. BARELLA: Mr. Uhler, this is Linda again,
4 Chief Counsel with the Energy Commission. For many, many
5 years the process here at the Energy Commission is that
6 draft resolutions that have not been voted on are placed on
7 the Commission's "This is a meeting" website. Resolutions
8 that are final that are approved by the Energy Commission
9 are immediately or soon thereafter, after the business
10 meeting, docketed on the proceedings docket number.

11 That is consistent with what we've done for many
12 years. I would be happy to talk to you after the business
13 meeting just to give you examples. Just for example, last
14 business meeting our resolutions once their final once the
15 Commission takes a vote. We proceed and file those
16 resolutions in the appropriate dockets.

17 CHAIR HOCHSCHILD: All right, unless there's
18 further public comment I'd welcome a motion on Item 10 from
19 Commissioner Vaccaro.

20 COMMISSIONER VACCARO: Can we -- I have a few
21 comments to make first.

22 CHAIR HOCHSCHILD: Oh yeah, okay.

23 COMMISSIONER VACCARO: Yeah, I know we got a
24 little turned around there. So Jared, thanks so much for
25 the presentation. I sound a bit like a broken record. But

1 maybe the best kind of record again, just recognizing this
2 rulemaking is yet another good example of the collaboration
3 between our legal teams and our staff teams.

4 I know that there was very good outreach and
5 engagement with respect to this rulemaking. It even
6 included briefings before the Blue Ribbon Commission on
7 lithium extraction in California, also known as the Lithium
8 Valley Commission, just to make sure that there was breath
9 in sort of state-wide recognition of this rulemaking.

10 I know there was also conversation with tribal
11 representatives who had some feedback with respect to
12 appendix B, that we considered. So thank you so much for
13 the work on this. I want to underscore just a couple of
14 points that you made.

15 We are making a big change here, moving away from
16 a quasi-adjudicative process with intervenors to one where
17 it's just a strictly CEQA process. I support both. I
18 think someone has quoted me in the record of this
19 proceeding, someone who had some comments not in support of
20 this move saying, "Commissioner Vaccaro says that
21 intervention and adjudication are valuable." They are and
22 I love that process, and I support it. But I also see
23 great value in what we're doing here, which is currency of
24 regulations. Looking at other ways to refresh and maximize
25 efficiency, and still allow for robust public process and

1 necessary analytical rigor. I think we have all of that in
2 this package. I'm very supportive of it.

3 And, you know, unless my Commissioners, fellow
4 Commissioners have other comments I would move approval of
5 this item.

6 CHAIR HOCHSCHILD: Great, is there a --

7 COMMISSIONER VACCARO: Oh, Patty or Commissioner
8 Monahan.

9 CHAIR HOCHSCHILD: Oh, okay. Go ahead.

10 COMMISSIONER MONAHAN: I just want to say how
11 excited I am about this and very strongly supportive. I
12 just think it'll make the process smoother, swifter,
13 hopefully with greater communication. And for those of us
14 who aren't attorneys and have been part of the SPPE
15 process, it's going to save us a lot of pain and heartache.

16 CHAIR HOCHSCHILD: Are you excited enough to
17 second the motion?

18 COMMISSIONER MONAHAN: I would be thrilled to
19 second the motion.

20 COMMISSIONER MCALLISTER: I want to just pile on
21 actually. I want to thank Commissioner Vaccaro for your
22 leadership on this. And, and yeah I echo the non-attorney
23 viewpoint of this. And this is a dynamic space. And it's
24 -- we're doing a lot of it. And so having it just kind of
25 up to date and adapting to our needs is great. So thanks,

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1 Jared and team for that.

2 CHAIR HOCHSCHILD: Okay, we have a motion from
3 Commissioner Vaccaro, a second from Commissioner Monahan,
4 all in favor say aye.

5 Commissioner Vaccaro?

6 COMMISSIONER VACCARO: Aye.

7 CHAIR HOCHSCHILD: Commissioner Monahan?

8 COMMISSIONER MONAHAN: Aye.

9 CHAIR HOCHSCHILD: Commissioner McAllister?

10 COMMISSIONER MCALLISTER: Aye.

11 CHAIR HOCHSCHILD: Vice Chair Gunda?

12 VICE CHAIR GUNDA: Aye.

13 CHAIR HOCHSCHILD: And I vote aye as well. That
14 item passes unanimously. Thank you, Jared.

15 I will turn now to Item 11, Lumen Energy
16 Strategy, LLC. [sic] Welcome, Elizabeth.

17 MS. HUBER: Good morning, Chair, Vice Chair, and
18 Commissioners. My name is Elizabeth Huber. I am the
19 Director for the Siting, Transmission, and Environmental
20 Protection Division. With me this afternoon is John
21 Heiser, Compliance Project Manager, and Lead Counsel, Jared
22 Babula. Representing the Project Owner, Calpine
23 Corporation, is Director of Strategic Origination, Barbara
24 McBride. And from their project partner, ION Clean Energy,
25 is Jennifer Atchenson, Operations Vice President, and

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1 Andrew Awtry, Vice President of Engineering.

2 We are here today to request your approval of a
3 petition to allow the Los Medanos Energy Center to work
4 with ION Clean Energy to demonstrate, on a pilot scale, its
5 solvent technology to capture carbon dioxide from a small
6 portion of flue gas from a single turbine exhaust at the
7 power plant. Next slide, please.

8 In May 2022, the Biden Administration announced
9 their intention to provide funding to the Bipartisan
10 Infrastructure Law's \$3.5 billion program to capture and
11 store carbon dioxide pollution directly from the air. U.S
12 Secretary of Energy, Jennifer Granholm stated, "Efforts to
13 deeply decarbonize the economy through methods like clean
14 power, efficiency, and industrial innovation, the
15 widespread deployment of direct air capture technologies,
16 and carbon dioxide transport, and storage infrastructure
17 plays a significant role in delivering on President Biden's
18 goal of achieving an equitable transition to a net-zero
19 economy by 2050."

20 Then on September 16, 2022, California Governor
21 Newsom enacted some of the nation's most aggressive climate
22 measures in history to accelerate the state's transition to
23 clean energy. Included in this legislative package is his
24 signing of Senate Bill 905, which advances engineered
25 technologies to remove carbon capture pollution by

1 establishing a regulatory framework for carbon removal and
2 carbon capture, utilization, and sequestration.

3 With a grant total of \$25 million between federal
4 funding and a public/private cost share, Los Medanos Energy
5 Center filed their petition with the CEC for a carbon
6 dioxide capture pilot project, which will in the long term
7 if the pilot is successful, reduce carbon dioxide emissions
8 and carbon dioxide product emitted to the atmosphere,
9 recombine adsorber effluent gas, and could provide as a
10 resource to a third-party user. Next slide, please.

11 The Los Medanos Energy Center is a 500-megawatt
12 natural gas-fired, combined-cycle power plant. It was
13 licensed by the CEC in August of 1999 and began commercial
14 operations in July of 2001.

15 On May 18, 2011, the CEC approved an efficiency
16 improvement project for additional generation to support
17 the state's early reliability initiatives. In 2020, the
18 CEC staff approved a software modification to allow for
19 increased firing temperature when additional generation is
20 needed during extreme weather events.

21 Then in March of this year, the CEC approved the
22 first of two carbon capture projects at Los Medanos, which
23 was the installation of a flue gas transit pipe for use in
24 an offsite demonstration project that is manufacturing
25 carbon dioxide sequestration upcycled rock products.

1 I defer here for a second to show you what these
2 little projects rocks look like, and an example of how it
3 is used in construction for beams in large buildings.

4 CHAIR HOCHSCHILD: Could you (indiscernible) --

5 MS. HUBER: Absolutely!

6 CHAIR HOCHSCHILD: Thank you.

7 MS. HUBER: Now, back to the petition before you
8 today. This is an onsite project at Los Medanos Energy
9 Center that will require the power plant to supply
10 approximately 0.04 percent of its flue gas through an
11 above-ground pipeline to a carbon capture and utilization
12 pilot system. The pilot project would be in operation for
13 approximately 15 months with the equipment removed from the
14 site after the pilot project is completed.

15 For this pilot, the CEC staff is recommending the
16 addition of new air quality Conditions of Certification for
17 consistency with the Bay Area Air Quality Management
18 District's new permit language. Next slide, please.

19 The diagram before you shows the carbon capture
20 utilization and storage pilot project. The carbon dioxide
21 from the power plant's flue gas is absorbed in an Amine-
22 based solvent. The almost pure carbon dioxide is then
23 separated from the solvent in the stripper. The solvent is
24 then recirculated back to the absorber. For this pilot,
25 the carbon dioxide will be vented to the atmosphere as this

1 is only testing the capture technology.

2 The ION Clean Energy ICE-31 Solvent that is being
3 tested, is a transformational Amine-based solvent that was
4 specifically designed for natural gas facilities. The ICE-
5 31 solvent is expected to demonstrate lower emissions, less
6 solvent degradation rates, and less energy requirements.
7 The pilot will test a generic amine solvent and the ICE-31
8 to compare specific design criteria like emissions, energy
9 requirements, and solvent degradation rates; and will
10 provide a first-hand opportunity to learn about the
11 implications of integrating post-combustion carbon capture
12 with power plant operations prior to progressing into a
13 commercial scale.

14 Since the typical carbon capture technology used
15 in Amine-based solvent to capture carbon dioxide in its
16 absorber, there is a potential for additional ammonia and
17 VOC emissions from the stack at the absorber outlet.
18 Similar to an ammonia slip in a catalytic reduction system
19 for NOx control, as you are all aware from our temporary
20 power generator projects.

21 One of the purposes of this project is to measure
22 actual emissions during carbon dioxide capture determine
23 what the emissions are during carbon capture. Currently
24 there is insufficient data from carbon capture of natural
25 gas combined cycles, so the emission estimates in the

1 application are very conservative. Next slide, please.

2 In conclusion, the CEC staff recommends your
3 approval of the order allowing for the Carbon Capture Pilot
4 Project and adopting the new Conditions of Certification.
5 Thank you.

6 CHAIR HOCHSCHILD: Elizabeth, before we move on
7 to discussion and public comment, just so we're clear that
8 chunk of cement there that you showed us, that is
9 containing this carbon that's been captured, the CO2 that
10 has been captured. Is that used as a construction material
11 or what's the application of that?

12 MS. HUBER: That's the intent for that one. We
13 do have Barbara here who could speak a little more detail
14 on it, yeah.

15 CHAIR HOCHSCHILD: I'm just curious if that
16 affects the structural integrity of cement or can it be
17 used?

18 MS. MCBRIDE: It is used for lightweight
19 aggregate (indiscernible) for high rises (indiscernible).

20 CHAIR HOCHSCHILD: Got it. Oh, yeah. Thank you,
21 Barbara, I appreciate it.

22 (Off-mic colloquy.)

23 MS. MCBRIDE: Sorry, yeah it is used for
24 lightweight aggregate, which is normally is specifically
25 used for like high rise buildings, or like parking

1 structures where it's, you know -- you need that lighter
2 concrete to get to the top of the structures.

3 CHAIR HOCHSCHILD: And there's no issue with the
4 structural integrity of the (indiscernible)?

5 MS. MCBRIDE: No, that's what they test. That's
6 really what they're testing in their pilot out there, is
7 making sure that it does meet all those structural
8 integrity tests then. Yeah.

9 COMMISSIONER MCALLISTER: Could you say your name
10 and spell it for the court reporter?

11 MS. MCBRIDE: Oh, Barbara McBride, B-A-R-B-A-R-A
12 M-C-B-R-I-D-E. Sorry.

13 CHAIR HOCHSCHILD: Thank you. Thank you, and
14 appreciate the show and tell.

15 So let's move now to public comment on Item 11.
16 You were finished right, Elizabeth?

17 MS. HUBER: I'm done.

18 CHAIR HOCHSCHILD: Any public comment, Dorothy?

19 MS. MURIMI: Thank you, Chair.

20 So for individuals that are in the room, go ahead
21 and use the QR code feature in the back of the room. And
22 for individuals that are in Zoom go ahead and use the raise
23 hand feature.

24 Actually, go ahead to the mic and please state
25 spelling your name for the court reporter.

1 MS. NEUMYER: Good afternoon, Chair,
2 Commissioners. I apologize for not using the QR code. I'm
3 a little new to this in person hearing thing. My name is
4 Samantha Neumyer with Ellison Schneider Harrison & Donlan
5 on behalf of the Project Owner. With us today is Barbara
6 McBride, who you just heard from as well as Peter So with
7 Calpine Corporation.

8 We're excited to be here today in support of the
9 petition. And we'd really like to thank staff for their
10 hard work, particularly Elizabeth Huber for her leadership
11 and the Compliance Project Manager John Heiser, for helping
12 to move this petition along.

13 We've reviewed staff's assessment and the
14 proposed order. We support staff's recommendation to
15 approve the petition, and we request that the Commission
16 adopt the proposed order. We're available for any other
17 questions. I'm going to leave the technical ones for Barb
18 and thank you.

19 CHAIR HOCHSCHILD: Thank you.

20 Any other public comments?

21 MS. MURIMI: Thank you, Chair. No public comment
22 on Zoom. Oh, we have one more commenter. I cannot say
23 this name. If -- I will unmute. Again, this is public
24 comment for Item 11. Your line is unmuted. Please state
25 and spell your name for the record.

1 MR. PUTTA: Hi, my name is Sampath Putta. I
2 would like to know what would be the effects of the
3 depleted carbon dioxide that will be released into the
4 atmosphere? Can somebody please answer?

5 CHAIR HOCHSCHILD: Sorry, sir. Could you repeat
6 your question, it is a little difficult to hear. And if
7 you could speak a little more slowly?

8 MR. PUTTA: Sure.

9 MS. MURIMI: And apologies if you could state and
10 spell your name for the court reporter. Thank you.

11 MR. PUTTA: Yeah, sure. Hi, everyone. My name is
12 Sampath Putta. I'm a California, San Jose resident. I
13 just have a general question about Item Number 11, which
14 was just presented. And the question is, what -- would
15 there be any environmental effects for the depleted carbon
16 dioxide that would be released back into the atmosphere?
17 Can somebody clarify?

18 VICE CHAIR GUNDA: I think they're asking if
19 there is an environmental impact in terms of the release of
20 the CO2?

21 MR. PUTTA: Yes.

22 MS. HUBER: Our analysis that we did in
23 conjunction with the Bay Area Air Quality Management
24 District determined it would be less than significant
25 environmental impacts.

1 MS. MURIMI: And apologies, commenter, if you
2 could give your first name for the court reporter, spell
3 it?

4 MR. PUTTA: Sure, my name is Sampath, S-A-M-P-A-
5 T-H, Sampath.

6 MS. MURIMI: Thank you so much.

7 CHAIR HOCHSCHILD: Is there any other public
8 comment?

9 MS. MURIMI: Chair, no more public comment in
10 person or on Zoom. Back to you.

11 CHAIR HOCHSCHILD: With that I would turn it over
12 to begin a Commissioner discussion to Commissioner Vaccaro.

13 COMMISSIONER VACCARO: Thank you.

14 So thank you, Elizabeth, for the presentation and
15 for bringing the visual aids. It's always helpful to kind
16 of see what we're talking about. So I really appreciate
17 that.

18 I have just a few brief comments. I mean, I read
19 the staff report. I think it's very thorough. I think It
20 makes the case for why the Commission can move forward, I
21 think with approving this application.

22 And I think the Project Owner should be commended
23 as well for just, you know, really kind of thinking about
24 all of the different ways and how broad the solution set
25 can be to help us advance our clean energy goals. I think

1 this is just an example of that. I know it's a pilot, so
2 there's information that's going to be learned from this.
3 I do look forward to seeing what the results are. But
4 again, I think this is a good solid application.

5 I appreciate that this was a discussion item,
6 instead of a consent item. I think it's always important
7 for us to kind of see where the different areas of
8 innovation are at the Commission. So with that, I support
9 this and unless my fellow Commissioners have comments, I
10 would move approval of this item.

11 CHAIR HOCHSCHILD: Great. Moved by Commissioner
12 Vaccaro, is there a second, Commissioner McAllister?

13 COMMISSIONER MCALLISTER: I'll second.

14 CHAIR HOCHSCHILD: All in favor say aye.
15 Commissioner Vaccaro?

16 COMMISSIONER VACCARO: Aye.

17 CHAIR HOCHSCHILD: Commissioner McAllister?

18 COMMISSIONER MCALLISTER: Aye.

19 CHAIR HOCHSCHILD: Vice Chair Gunda?

20 VICE CHAIR GUNDA: Aye.

21 CHAIR HOCHSCHILD: Commissioner Monahan?

22 COMMISSIONER MONAHAN: Aye.

23 CHAIR HOCHSCHILD: And I vote aye as well. Item
24 11 passes unanimously. Thank you, Elizabeth, and to the
25 stakeholders.

1 We'll turn now to Item 12, Proposed Resolution
2 Approving the *Gas Research and Development Program 2022*
3 *Annual Report*.

4 MS. WERNER: Hello, Chair, Vice Chair,
5 Commissioners. My name is Misa Werner, and I work in the
6 Energy Research and Development Division. I am happy to
7 present this year's Gas R&D Annual Report covering fiscal
8 year '21-'22. Next slide, please. Thank you.

9 Highlighting benefits to Californians. This
10 report increases awareness of gas-funded technologies. And
11 it synthesizes information on innovative approaches to
12 reduce gas consumption and greenhouse gas emissions. Next
13 slide, please.

14 The report provides the Legislature, the CPUC,
15 and the public with a summary of the CEC's Gas R&D
16 progress, its impacts, and ratepayer benefits. The report
17 is structured as a CEC staff report and it covers the
18 topics shown on the slide. I will jump right into the main
19 points that are bolded. Next slide please

20 I'm excited to show you some Gas R&D Program
21 Metrics here on the slide. This is an essential portion of
22 the report where we highlight program level metrics that
23 are aggregated and show the impact of our research
24 projects.

25 Over \$311 million in Gas R&D Program funds has

1 been invested to date through nearly 300 projects. Project
2 recipients have gone on to attract over \$6.1 billion in
3 private investment after being selected for a Gas R&D
4 Program award. That's 20 times the initial public
5 investment.

6 About 71 percent of program funds have been
7 invested in disadvantaged, low-income communities, or both
8 since 2016.

9 More than 20 projects have informed codes,
10 standards, proceedings, or protocols.

11 And at least 44 technologies or products have
12 been commercialized resulting from Gas R&D projects and
13 many more moving toward commercialization.

14 And more than 15,700 citations have been made to
15 publications referencing research from gas-funded projects.
16 Next slide, please.

17 Next, we have an aggregated view of total funding
18 in our investment areas since program inception. This
19 shows investment priorities over time, and some of the
20 areas where we will be highlighting projects next. Gas R&D
21 investment areas include the entrepreneurial ecosystem;
22 building decarbonization; gas system decarbonization;
23 industrial and agricultural innovation; transportation; and
24 resiliency, health, and safety. Next slide, please.

25 So stepping into our project highlights this year

1 for Building Decarbonization. Healthcare facilities and
2 large commercial buildings use large amounts of natural gas
3 for space and water heating and for other process loads, so
4 for this investment area we have two highlights featuring
5 those types of buildings.

6 First up is a demonstration of a systems-
7 efficient approach at the Kaiser Hospital in Baldwin Park.
8 GTI is demonstrating four primary measures, which together
9 add up to a cost effective systems approach with
10 significant gas use reduction.

11 Those measures include using a heat recovery
12 chiller and integrating stack economizers to reduce steam
13 boiler fuel requirements. Implementing a variable-air-
14 volume system. Designing air handlers with separate cold
15 and hot decks to optimize economizer mode. And employing
16 an optimal control strategy to minimize building HVAC
17 energy consumption.

18 Some of the key project metrics are shown here in
19 the blue box like the goal of 30 percent reduction in
20 greenhouse gas emissions. Next slide, please.

21 The next project on building decarbonization is
22 with UC Berkeley's Center for the Built Environment. And
23 it focuses on existing large commercial buildings. The
24 focus is on unnecessary demand for space heating, hot water
25 distribution losses, and poor boiler operational

1 efficiency.

2 CBE is demonstrating and evaluating scalable
3 packages of non-proprietary low-cost software control, and
4 other measures to substantially reduce gas consumption.
5 That includes measures helping ensure higher cost retrofit
6 items like boiler replacements are done as energy and cost
7 efficiently as possible.

8 One of the project goals that we show here
9 includes reducing annual gas consumption by 60 percent.
10 Next slide, please.

11 Next up is a project in the areas of gas system
12 decarbonization and industrial and agricultural innovation.
13 Element-16 Technologies had developed and demonstrated a
14 combined cooling, heating and power with thermal energy
15 storage system, or CCHP-TES for short, for commercial
16 sectors.

17 The key aspect of this technology is the novel
18 integration of low-cost molten sulfur as the storage fluid,
19 and this can store and discharge heat efficiently. In
20 doing so, flexibility is added to the CCHP system by
21 allowing the production of electricity and steam to occur
22 at different times. This allows the system to operate at
23 high efficiency by storing waste heat for cooling or for
24 power generation during high demand. The system stores
25 high temperature heat and discharges energy more

1 efficiently and compactly compared to conventional hot
2 water thermal storage.

3 Some project metrics are listed on the slide.
4 For example, notably the project's annual natural gas
5 savings of approximately \$7,000-\$9,000. Use of the system
6 can reduce peak demand and interact with the grid to
7 provide dispatchable power and essential services. Next
8 slide, please.

9 For transportation, we have a project that is
10 developing an actionable hydrogen fuel cell-powered tugboat
11 design that will be ready for construction and
12 implementation at the Port of Los Angeles. The design and
13 feasibility study is addressing challenges related to using
14 liquid hydrogen to power the tugboat, including how it can
15 be produced and delivered ports.

16 As you can see from all the logos on the slide,
17 this is a team effort involving a diverse consortium of
18 leading maritime industry stakeholders and others.

19 Some key takeaways from this project:

20 Renewable gas, such as hydrogen, can play a role
21 in decarbonizing maritime applications that may be
22 challenging to electrify directly.

23 The project will address safety, technical, and
24 economic challenges of using liquid hydrogen and fuel cells
25 at megawatt-scales and substantially reduce harmful

1 emissions to local communities near ports.

2 The team has completed a preliminary vessel
3 design, developed a regulatory map, and is seeking follow-
4 on funding to build the vessel. Next slide, please

5 The last highlight is in the resiliency, health,
6 and safety area. This project develops, tests, and
7 demonstrates a smart shutoff safety system to help gas
8 customers safeguard their lines in homes and businesses.
9 The system provides additional protection during hazardous
10 events and the ability to automatically terminate gas flows
11 when necessary. This research integrates safety sensors
12 and shutoff valves into a smart shutoff platform, and
13 provides network connectivity to monitor the system status
14 via a web-based interface.

15 Some key takeaways: Current safety devices do not
16 possess "Internet of Things" or IOT connectivity to
17 automate the safety response among emergency personnel,
18 customers, and gas utilities.

19 This tech provides a safety layer that protects
20 ratepayer life and property. With smart sensors and
21 automation, the necessary interventions will be in place
22 and avoid potentially hazardous events from gas leaks,
23 fires, earthquakes, and floods.

24 On this slide are some metrics from the project
25 including the estimated market at 9 billion in just a

1 couple years. Next slide, please.

2 Staff recommends the Commission approve the *Gas*
3 *R&D 2022 Annual Report*. That concludes my presentation and
4 I have technical staff here and online to back me up on
5 project-specific questions you may have. Thank you.

6 CHAIR HOCHSCHILD: Thank you so much.

7 So let's go to public comment on item 12.

8 MS. MURIMI: Thank you, Chair.

9 Once again, for individuals that are in the room,
10 utilize the QR codes in the back of the room, not just for
11 this item, for other items as well. For individuals on
12 Zoom, go ahead and use the raise-hand feature. It looks
13 like an open palm at the bottom of your screen. And for
14 individuals calling in press * 9 to indicate that you'd
15 like to make a comment giving.

16 Giving that one moment. Oh, we have one
17 commenter on Zoom. Go ahead, Mr. Butta.

18 MR. PUTTA: Yeah. Hi, everyone. Again, my name
19 is Sampath Putta. I have a question about the
20 transportation slide that was presented, which will --
21 which involved in seeking vessel design and the funding to
22 build the vessel? Can you please clarify how feasible it
23 is to switch from hydrogen -- I'm sorry, to switch from
24 natural gas to hydrogen? Because hydrogen, in my opinion,
25 is much costlier than gasoline at the moment. So how are

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1 you taking the trade off in? transitioning? Can somebody
2 please clarify?

3 MS. WERNER: I believe that's part of the
4 feasibility study. But I do have a technical person here
5 that might be able to answer that.

6 MR. STOKES: Yeah, so I think that's a much
7 bigger question for regarding the cost feasibility of
8 hydrogen versus gas. Just one of the things we're looking
9 at --

10 UNIDENTIFIED SPEAKER: Identify yourself?

11 MR. STOKES: Sorry, Erik Stokes, Energy Research
12 and Development Division. You know, for this specific
13 project, but we're really looking at the feasibility for
14 this specific application, this hygiene application. And
15 really the benefits that go along with it.

16 And as Misa touched upon in her presentation,
17 there's tremendous air quality benefits too, not just in
18 terms of greenhouse gas emissions, and specifically around
19 areas that have experienced some pollution burns. So like
20 I said, really the focus of this project is just around
21 kind of the feasibility of this specific application. And
22 I think to the broader question, that's a much longer
23 discussion.

24 CHAIR HOCHSCHILD: Thank you.

25 Any other public comment on Item 12?

1 MS. MURIMI: Thank you, Chair, no more public
2 comment. Back to you.

3 CHAIR HOCHSCHILD: Well, I would just pick this
4 opportunity to say thank you, Misa. So I reviewed the
5 report. I'm really happy with the breadth and depth and
6 the focus. And this is a terrific set of projects and
7 priorities.

8 Commissioned McAllister, I don't know if you want
9 to add?

10 COMMISSIONER MCALLISTER: Yeah, just briefly,
11 great report. Thanks for being so diligent and
12 comprehensive. And I just wanted to highlight you know,
13 this program is actually a long-standing program that's
14 produced a lot of innovative research over the years. And
15 as we pivot to decarbonization, it requires us to sort of
16 be creative in how we actually define the problem and
17 select projects. And I think this portfolio does that.
18 And I know that you're doing that in future solicitations,
19 as well. So thanks for this sort of stake in the ground at
20 this particular moment and really appreciate the report and
21 update.

22 CHAIR HOCHSCHILD: Great. Do you mind moving the
23 -- Oh, yeah, go ahead.

24 COMMISSIONER MONAHAN: Just a quick comment.
25 Also, I really appreciate actually the pithiness of the

1 report. It really got to the salient issues quickly. So
2 just, it's nice to be able to have -- a lot of times we get
3 so many long 100-page reports it actually makes it hard to
4 read everything. I could read this report, so thank you.

5 Also, I just want to comment, maybe building on
6 what Erik was saying about the hydrogen tugboat
7 demonstration project. I actually think that's a great use
8 of these monies. I want to emphasize that, you know,
9 marine vessels may be a really good place for hydrogen to
10 play a role, and particularly for marine vessels that have
11 to cross the ocean. So I think we want to really explore.

12 And I know, we facilitate a ports collaborative.
13 The ports are really interested in hydrogen and trying to
14 figure out what role hydrogen could play in port
15 decarbonization. And as Erik noted, it's really important
16 for communities that live nearby ports too, so this is a
17 really good area of research.

18 I also think we're all I would say, concerned
19 about what happens to lower-income families if higher-
20 income families electrify and the gas system becomes more
21 costly. So this intersection with equity is really
22 important. I know the report really emphasized how much
23 funding is going in disadvantaged communities. And I would
24 just encourage that continued exploration of how do we make
25 sure that lower-income families are not burdened even

1 further as we decarbonize our system.

2 CHAIR HOCHSCHILD: Thank you, Vice Chair?

3 VICE CHAIR GUNDA: Thank you, Misa, for the
4 presentation. Also, the briefing on this.

5 And actually Commissioner Monahan just touched
6 upon a couple of things we discussed in our meeting as
7 well. And I just wanted to share that I think the report
8 does a good job on just, you know, kind of looking at the
9 investments we're making in terms of disadvantaged
10 communities and low income. I think, you know, we want to
11 adapt that further to look at what the impacts of the
12 investments are, for the communities. And I think that's
13 something that no one has been working on in terms of
14 developing a broader framework and look forward to
15 furthering that conversation. Thank you.

16 CHAIR HOCHSCHILD: Okay, Commissioner McAllister,
17 would you be willing to move Item 12?

18 COMMISSIONER MCALLISTER: I move Item 12.

19 CHAIR HOCHSCHILD: Is there a second, Vice Chair
20 Gunda?

21 VICE CHAIR GUNDA: Second.

22 CHAIR HOCHSCHILD: All in favor say aye.

23 Commissioner McAlister?

24 COMMISSIONER MCALLISTER: Aye.

25 CHAIR HOCHSCHILD: Vice Chair Gunda?

1 VICE CHAIR GUNDA: Aye.

2 CHAIR HOCHSCHILD: Commissioner Vaccaro?

3 COMMISSIONER VACCARO: Aye.

4 CHAIR HOCHSCHILD: Commissioner Monahan?

5 COMMISSIONER MONAHAN: Aye.

6 CHAIR HOCHSCHILD: And I vote aye as well, Item
7 12 passes unanimously. Thank you, Misa.

8 We'll turn now to Item 13, Indian Energy, LLC.

9 MR. STOKES: There we go. Good afternoon,
10 Commissioners. My name is Erik Stokes. I'm the Deputy
11 Director in the Research and Development Division. I'm
12 joined by my colleague Mike Gravely today. And we're
13 seeking Commission approval for approximately a \$31 million
14 grant with Indian Energy to deploy what's really the first
15 of a kind 60 megawatt hour energy storage battery system.
16 This is our first award from the new long-duration energy
17 storage program, which was approved in this most recent
18 budget.

19 Before we get to the project, I'd like to take a
20 few minutes just to talk about why this program is so
21 critical. Next slide, please.

22 So Mike really touched upon this in his
23 presentation last month at the business meeting. But
24 energy storage is critical to a lot of our clean energy
25 policy goals, both around near-term reliability, as well as

1 our longer term decarbonization goals and kind of
2 everything in between those two. Chair, you touched upon
3 this earlier today. I mean, California is already
4 delivered 3,600 megawatts of energy storage. And that's an
5 incredible milestone, specifically looking back to where we
6 were just a few years ago.

7 But there's still a major ramp up in energy
8 storage that needs to happen. And just looking back to the
9 joint energy agency, SB 100 report, which identified the
10 need for 40 to 50 gigawatts of energy storage to come
11 online around 2045. And looking a little more near term to
12 midterm the CPUC published plans to procure up to 15,000
13 megawatts of energy storage by 2032. And know that 1,000
14 is called for long-duration energy storage. Most of this
15 procurement is expected to take place between the 2025 to
16 2028 timeframe, to really be online by 2032. And we think
17 this window is a major opportunity for these non-lithium
18 technologies, if we can get them to scale so that they can
19 compete in this timeframe. And we really see the LDS
20 program as a major, major force in being that stepping
21 stone to get these technologies from where they're
22 currently at to a full scale system by that timeframe.
23 Next slide.

24 Yeah, so why do we care about establishing the
25 commercial viability of these non-lithium long duration

1 energy storage technologies? You know, currently, we're
2 relying on one technology for energy storage in using
3 lithium ion. And lithium is a great technology, it's
4 really enabled us to achieve a lot of our clean energy
5 progress.

6 But it's not a silver bullet. There's been a lot
7 of well-publicized concerns about supply chains and safety
8 issues with lithium ion technology. And as part of our
9 broader energy storage strategy we're working to develop
10 safer lithium battery cells. We're also doing a lot of
11 work to bring a lot of that domestic supply chain
12 manufacturing into California. But there's also a lot of
13 opportunities with new types of non-lithium storage
14 technologies. And may the non-lithium technologies we're
15 seeing can help address these supply chain safety
16 challenges. They typically use more earth abundant
17 materials. They don't suffer from the same thermal runaway
18 challenges that lithium ion does.

19 However, these technologies are still very
20 nascent technologies, and right now they're having to
21 compete with a much more mature, bankable technology that's
22 really already realized economies of scale in lithium ion.
23 Next slide.

24 So through our programs, we're calling what we
25 call kind of this bridge to bankability. And it's really

1 starts with our EPIC program and through EPIC, we've really
2 helped move a lot of these non-lithium technologies kind of
3 through the innovation pipeline and through some of these
4 valleys of death. And just as one example is our CalSEED
5 Program. It really kind of targets that first valley of
6 death. It's a small amount of funding, but it's so
7 critical at that stage towards that startup foundation.

8 But there's really been a major gap that EPIC
9 hasn't been able to address. And it's at that later stage
10 of the pipeline, kind of that last valley of death, in
11 which these new technologies -- they need to really move
12 from, you know, what's typically been kind of a one
13 megawatt pilot system to something that's more full scale.
14 And through that full scale system can really demonstrate
15 and de-risk the technologies for the private sector. And
16 really start to make these technologies be seen as bankable
17 for project financing, as well as our investments really
18 ramped up the manufacturing. Next slide, please.

19 So lastly, before I turn it over to Mike, I just
20 wanted to provide a little bit of look ahead for our long-
21 duration energy storage activities in 2023. We're planning
22 to have our next CalSEED solicitation sometime in the
23 winter timeframe. So it'll be you know, really kind of the
24 pot funding for some of these new advanced non-lithium
25 technologies that are still kind of early and maybe they're

1 spinning out of the universities and labs into some startup
2 companies. We also have our ramp program, in which several
3 non-lithium technologies have benefitted from.
4 Applications are due in the winter 2023 timeframe. And
5 this really helps companies start to ramp up their
6 manufacturing to be able to fulfill some of these larger
7 orders.

8 Also, we have our federal cost share process.
9 We're going to really be looking at Department of Energy
10 solicitations and really been using to leverage our funding
11 to bring a lot of federal funding for these types of
12 projects to California. And then we're targeting a
13 solicitation, a large scale solicitation 2023 timeframe.
14 It's somewhere you'll see the range between \$50 to \$180
15 million, 50 million would be the minimum. And that would
16 only be if we don't get kind of the remaining \$240 million
17 authorized through the budget for this process, for this
18 program. We fully expect to, and if we do, that
19 solicitation will be more towards \$180 million mark.

20 Part of that solicitation, we're planning a
21 public workshop to really get input on how we design the
22 solicitation, including some of the requirements.

23 And with that, I'll turn it over to my colleague,
24 Mike Gravely, who will talk a little more about this
25 project and some of the technologies.

1 MR. GRAVELY: Thank you, Erik. Next slide,
2 please.

3 So as Erik mentioned, the EPIC program has a long
4 history in energy storage and also long-duration energy
5 storage. In 2020, the Commission released -- awarded 25
6 grants of which 11 of those grants were for long-duration
7 storage. Eight of those were actually for field
8 demonstrations, anywhere from 50 to 500 megawatts, and up
9 to as large as 8 megawatt hours.

10 And also, three of those grants were for long
11 duration (indiscernible) for early states 100 hours of
12 systems for so multiple day systems. So we have a long
13 history and we've been doing this for the last three years.
14 The legislation that authorized a long-duration storage
15 also provided us very specific guidance and ability to take
16 these programs that are ready for the advancement to the
17 next level and do those in a noncompetitive environment.
18 And (indiscernible) does mention our competitive approach
19 we'll be pursuing. Next chart.

20 In doing this and setting up these programs, we
21 developed a solicitation selection process or qualification
22 selection process. Obviously, the first thing these
23 companies have to do is have one or more competitive
24 awards, that they have won through the EPIC competitive
25 process. They have to perform well in those grants.

1 The second thing is they have to have the ability
2 to expand. Most of these companies have to grow their
3 manufacturing capacity to get to the scale we're talking
4 about. And not all of them have the ability to do that.
5 So we look -- the other one is we're looking for companies
6 that are doing more than just the EPIC grants. They've
7 expanded their horizon to the US and outside the US.

8 Also, they have many -- in the case of the ones
9 we're talking today, the two companies today, both have
10 recently received private capital investments to help them
11 grow their manufacturing. Not only can meet this scale,
12 but meet even a bigger scale.

13 When you look at the goals for California, and
14 we're talking about 15,000 megawatts and potentially 40 or
15 50,000 megawatts, you need to be able to deliver systems in
16 a 500 to 100 megawatt scale. We had a workshop in April
17 here. We talked to several other companies. They all said
18 the same thing: this 5 megawatt to 10 megawatt is the
19 stepping stone that they need to convince the investment
20 community that they can perform and convince the world that
21 they're there. And then they can take that next step up to
22 that 50 megawatt system.

23 And also one of the benefits of today's systems
24 is the system we're proposing today, if approved, will
25 actually be up and running by June of next year. And being

1 able to support the grid next summer. Next chart.

2 The project itself is a micro grid project with
3 the Viejas tribe of Kumeyaay Indians. And it's a 60
4 megawatt, 6 megawatt 10 hour battery. It also includes 15
5 megawatts of PV and includes a upgraded distribution system
6 to make it more efficient and more productive.

7 It also will provide -- the micro grid will
8 provide key support to the to the tribe itself, but also
9 the community around it. Many of you have had a chance to
10 visit the Blue Lake Rancho Ria micro grid, and how during
11 emergencies they were able to help the community not just
12 their community, but the community around them. This micro
13 grid will be providing the same services to their community
14 and the community around them.

15 If you look at the picture here, up in the upper
16 right corner, you'll see where the location of the 60
17 megawatts of batteries will be. And then in the lower
18 left, you'll see where the 15 megawatts of PV and also
19 their undergrounding of the distribution system to upgrade
20 it for higher reliability. Next chart.

21 So as I mentioned, we have two technologies today
22 that we'll be demonstrating and advancing to a higher
23 level. EOS is a zinc hybrid-based technology and Invinity
24 is a flow battery. Both of these have won multiple EPIC
25 awards and performed well. Both of these companies have

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1 gotten orders both in the US and outside the US. So they've
2 expanded their knowledge from EPIC to allow them to grow.
3 And both of them have received substantial investments in
4 growing their manufacturing capacity. So they can not only
5 meet the needs of this program in the next nine months, but
6 also grow to a bigger system in the next few years. Next
7 chart.

8 So with that, I'm here to answer any questions,
9 but we're requesting approval of the grant and requesting
10 the staff approval the staff determination that the project
11 is exempt from CEQA. I'm here to answer your questions.

12 In addition, we have representatives from the
13 tribe, from Indian Energy, EOS and Invinity, either here in
14 person or on online to talk and make few comments. And
15 with that I will be glad to answer any questions the
16 Commissioners have.

17 CHAIR HOCHSCHILD: Thanks so much, Michael.

18 We'll turn now to public comment on Item 13.

19 MS. MURIMI: Thank you, Chair.

20 Once again for individuals that are in the room,
21 go ahead and use the QR codes located in the back of the
22 room. For those on Zoom go ahead and use the raise hand
23 feature. It's looks like an open palm at the bottom of
24 your screen. And for those calling in press * 9.

25 We'll start with individuals in the room. I have

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1 Allen Gcadreau, apologies for misstating your name. Please
2 stand to the podium, state and spell your name, and you may
3 give your comment.

4 MR. CADREAU: G like George, C-A-D-R-E-A-U. I
5 want to say thank you, Chair, Vice Chair, Commissioners.
6 This is an honor to be standing before you. That was my
7 birth name. My given name in Anishinaabe is Nukazid Oday
8 Ing Najinikaz. (phonetic) And that is "the soft-hearted
9 one" that I'm called.

10 On behalf of the Kumeyaay Indians and the Indian
11 Energy team we really want to express our gratitude for
12 this opportunity. This has a wide ranging up opportunity
13 to apply in so many different manners, the extension of
14 what's before us right now in terms of our current
15 partnership. And it's been wonderful.

16 I can't tell you how much of an honor it has been
17 and the talent that is working collaboratively not only
18 this project, but on our MCCAAT for the Marine Corps, as
19 well as Camp Pendleton. And this opportunity to blend and
20 support in a time it was amazing to me to listen and
21 experience what you guys are doing here from 10:00 o'clock
22 until now. And the dovetail of everything that you guys
23 and gals have put together is phenomenal.

24 And on behalf of the Department of Energy, on
25 behalf of the Expeditionary Warfare Center on the Marine

1 Corps, the Department of the Navy, all of the indigenous
2 within this country, and I would say across the world,
3 we're thankful for this opportunity and this consideration.
4 Chi-miigwech, thank you very much.

5 CHAIR HOCHSCHILD: Thank you so much for being
6 here.

7 MS. MURIMI: Next we have Erich Hans. Apologies
8 if I've misstated your name.

9 MR. HANS: No, you stated it perfectly. Thank
10 you.

11 MS. MURIMI: Please state and spell your name for
12 the record.

13 MR. HANS: Sure, Erich Hans, with the Viejas,
14 Chief Financial Officer, E-R-I-C-H H-A-N-S.

15 Earlier this morning, I heard very exciting
16 terminology. I heard moments of action. I heard doubling
17 down. I heard tripling down. We can relate to that as
18 casino operators. But more importantly, it's really
19 critical that everyone understands that Viejas Casino and
20 Resort is more than a casino. It's more than a commercial
21 operation. It provides the entire economic resource for
22 the tribe and the tribal community. So when we talk about
23 diverting our power source, it is significant.

24 If we have the ability to go back to the screen
25 that had the physical shot of the property, what's

1 important for us to realize is as a Chief Financial
2 Officer, what you always want is reliable, abundant source
3 of power with predictive pricing. We have none of that in
4 San Diego County at the moment at the moment, and it's not
5 anyone's fault. We have high wind speeds. We have rolling
6 blackouts. We have intermittent shut offs.

7 And we have a pricing model that is impossible to
8 keep pace with. We currently have seven-figure annual
9 utilities rapidly approaching eight-figure annual utilities
10 with inconsistent reliability. And that does not work for
11 a 24/7 operation; 24/7 is not a slogan. We in fact do
12 operate 24/7. So power consistency is vital.

13 It's also important for me to have you realize
14 that you have an engaged partner in Viejas. And it's
15 important when a solution set is under consideration that
16 everybody has skin in the game. And I'd like to speak for
17 a moment of the financial skin that Viejas is contributing
18 to this. We have funded for the past three years our
19 collaboration with Indian Energy to develop non-lithium
20 based long-duration battery storage on site. We have
21 provided commercial contracts, which commit hundreds of
22 millions of dollars from Viejas over the next 30 years,
23 that they in turn can use for their commercial lending
24 purposes. We ourselves are funding directly assets in
25 excess of \$30 million that will serve as the generator

1 backup to the system and integrate directly with the
2 system.

3 In our most recent expansion, which is underway
4 as we speak, we are bringing forward a 2,500 space parking
5 garage. We are doubling the state's minimum requirements
6 for EV charging stations. We are pre-wiring for 20
7 percent. We are delivering 10 percent upon installation
8 and opening of that facility next year. We know the
9 importance of sustainable energy, not just for our future
10 as a commercial entity, but for the tribe and for our
11 community.

12 Last but not least, we as a big box operator are
13 putting too much pressure on our local grid, right? So
14 when we step off of that grid, we are not the lone
15 benefactor of that. The San Diego community at large
16 benefits from that. And if we can serve as a viable
17 alternative in a big box utilizer to show that this can be
18 done in a different way wouldn't we all benefit from that?
19 I think the answer to that is yes. We appreciate your
20 consideration. Thank you so much.

21 CHAIR HOCHSCHILD: Thank you.

22 MS. MURIMI: Thank you for your comment. Next we
23 have -- oh, apologies, one moment. Next we have Colin
24 Boone. That's C-O-L-I-N B-O-O-N-E.

25 CHAIR HOCHSCHILD: Dorothy, who's up after that?

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1 MS. MURIMI: After that we have a few folks on
2 Zoom.

3 MR. BOONE: Good afternoon. Thank you for
4 spelling My name beforehand. That's helpful.

5 I first want to thank you, Commissioners and
6 Chair and Vice Chair. It's very much a privilege to be up
7 here in front of you today. This is an important moment we
8 think. As we look forward to focusing on long-duration
9 energy storage, non-lithium energy storage, it is something
10 that's critically important to our company personally. And
11 Invinity Energy System was born from Avalon Battery in
12 Oakland, California, the powerhouse incubator. So we spent
13 many years there developing our products and working. For
14 those of us who live and work and have children in
15 California this is an incredibly important moment for our
16 energy future.

17 I want to talk about just a couple of things in
18 this project that we think are exemplary and unique. And
19 it's important to note that first of all this is this is
20 something for us that we've been working on for a long
21 period of time. It is something that we actually believe
22 is a critical undertaking in something that's rather
23 unique. We're focused on long-duration energy storage as a
24 key component of a 24 by 7 operation. We're going well
25 beyond 2 hours, we have 10 hour goals. We'll exceed those

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1 goals. We're looking at doing longer and longer energy
2 duration with our product and many other products in this
3 group.

4 The micro grid that we're going to support will
5 support both the community as well as the commercial
6 aspects of the area. It'll also be a proof source and a
7 stepping stone to future much more scalable projects that
8 will have greater and greater impact in the State of
9 California as we look towards moving towards a carbon
10 neutral environment.

11 The thing that's really very unique is that we're
12 going to deliver this in less than a year. So a year from
13 now, we can be standing here talking about this and have
14 this up and operational and we can see the impact and we
15 can measure it. And we can resolve any issues that come
16 up. And we can start to plan for the future, because we
17 realize that scaling is really the important event that
18 comes out of this ability to really impact California's
19 future as well as the global future.

20 So I want to thank our partners. I want to thank
21 the committee. We appreciate the opportunity. We want to
22 thank Indian Energy, Viejas Tribe, EOS. We've had great
23 partnerships and great working relationships and we very
24 much appreciate the work that Mike has done with this over
25 the years. So thank you very much.

1 MS. MURIMI: Thank you.

2 Before moving to our Zoom commenters, we have a
3 comment to be read out from Terry Considine. I'll go ahead
4 and read that out. That's Terry T-E-R-R-Y Considine, C-O-N-
5 S-I-D-I-N-E, CEO of AIR Communities.

6 "I am writing you today to voice our support for
7 the Viejas Enterprise Micro Grid Project and the grant
8 award to Indian Energy.

9 "In 2014, our team at Rams Hill in Borrego
10 Springs, California undertook the move toward a more grid
11 secure and cost predictable model for our properties in
12 California. Starting in San Diego County with our Rams
13 Hill property, we looked for subject matter experts with
14 unique skill sets to help us accomplish this corporate goal
15 via renewable microgrids.

16 "Through this effort, we began to work with the
17 Indian Energy team. The result was the solar 12 KV micro
18 grid that we and members of the Indian Energy team still
19 operate today at Rams Hill.

20 "Currently members of the Indian Energy team are
21 involved in the operations of our micro grid as we prepare
22 to make that system 100 percent renewable based on long-
23 duration energy storage coming out of the rapid integration
24 and commercialization unit, or RICU at MCAS Miramar. This
25 is a major goal for us.

1 “The technologies and technical solutions coming
2 from this award will be of great benefit to us and to those
3 who follow after us with real estate investments throughout
4 California. I watch with great interest the work of your
5 Commission. We are eager to utilize the technical
6 derivatives within our own portfolio to support the state's
7 resiliency and climate adaptation goals. This will benefit
8 our properties, our customers, and the California community
9 at large.

10 “We’re enthusiastic and our support for this
11 project and the Indian Energy team. We recommend that you
12 make the award on the October 12th. It will be a big step
13 forward with this group, with this proven and capable team.
14 Sincerely, Terry Considine.”

15 MS. MURIMI: Now we'll move on to Zoom. We have
16 Alex Morris, please state and spell your name, and give
17 your affiliation if any. You may begin.

18 MR. MORRIS: Hi, Commissioners. Alex Morris, A-
19 L-E-X M-O-R-R-I-S, with the California Energy Storage
20 Alliance or CESA. I wanted to thank everybody for the
21 chance to comment, and Chair Hochschild, and those you have
22 had a chance to connect with, I appreciate your time.
23 We're excited to have this long-duration energy storage
24 program starting to take shape. And I wanted to just
25 explain briefly CESA's role and where we go from here.

1 CESA is the voice of grid connected storage in
2 California. We have 120 members and we helped shape and
3 support the growth of storage for many years over a decade
4 now working with the Energy Commission. It's exciting to
5 collaborate with the Energy Commission and we appreciate
6 the staff's willingness to work with us over the years, and
7 to receive valuable and critical input from industry on how
8 to design programs that truly will commercialize storage.

9 The commercialization of energy storage, as we're
10 contemplating here, requires the maturation of the entire
11 commercial system of a new technology. And that includes
12 financing insurance, contracting terms, operational safety
13 and standards, permitting and operations, and all of this
14 at sufficient scale.

15 As such, we need a program that rises to this
16 challenge. And this means that we need to make material
17 and competitive program awards that recognized this program
18 needs to be bigger and different from the smaller grant
19 programs we also rely on through the Commission. I think
20 Erik Stokes chart of the different valleys of death
21 highlights this. And we're really appreciative of the
22 chance to focus on those later valleys of death, which are
23 truly a significant barrier to commercializing all of these
24 technologies.

25 One thing is I do want to emphasize the need

1 going forward to have further competitive solicitations for
2 these funding opportunities. And CESA appreciates the
3 plans to develop more program input from stakeholders.
4 Hearing from the voice of storage in California, I think is
5 crucial and beneficial to designing a program that really
6 works to meet California's toolkit. And it's important
7 that we do that, because this long-duration
8 commercialization program, which CESA helped to pass is one
9 of a kind. It very well may be the last best shot we have
10 to bolster our energy storage toolkit to meet our
11 decarbonization needs. And as such CESA's keenly focused
12 on making sure this program is designed to achieve success.

13 So input on commercialization plans from various
14 candidate technologies are going to be key. And we want to
15 allow proper competition and we're for the funding to
16 ensure that the right levels of skin in the game occur.
17 And that we're pursuing projects with an eye towards the
18 company's specific commercialization plans. I look forward
19 to maximizing the value of this critical program and
20 ensuring it supports both the program's goals and our
21 state's goals and reliability.

22 And with that, I want to say thank you and good
23 luck with the Indian Energy project and good luck to that
24 team.

25 MS. MURIMI: Thank you.

1 Next we have Ivan Jones. Please say spell your
2 name. Give your affiliation you may begin your comment.
3 Please unmute on your end.

4 MR. JONES: Am I unmuted?

5 MS. MURIMI: Yes, you are now. Thank you.

6 MR. JONES: My name is Ivan Jones. I am a member
7 from the Khoikhoi and the same ancient tribes from Cape
8 Town, South Africa. I am here to support Viejas micro
9 grid, long-duration energy storage project led by Indian
10 Energy. I met the leadership of Indian Energy in San
11 Diego, around 2014. And since that time, they have
12 assisted me in South Africa to develop utility scale energy
13 projects. And those projects have now started to mature,
14 so that we can talk to government about the program. And
15 at the same time, speak to the big mining houses and other
16 big energy users in South Africa.

17 Currently, South Africa is a state of a serious,
18 serious energy crisis. We lack the basic technology and
19 know-how to solve our energy challenges. We have regular
20 rolling blackouts for the past 14 years. For three hours
21 while I was on the Zoom, I was sitting in darkness, because
22 of these rolling blackouts.

23 It is through our partnership and the knowledge
24 we have learned from Indian Energy that we know the
25 technology and solutions exist to solve these problems. We

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1 hope to roll out the same long duration energy storage
2 microgrid project in South Africa, using American
3 technology and the support of Indian Energy in the near
4 future.

5 We thank the California Energy Commission for its
6 boldness in leading through action. And once again,
7 strongly support the Viejas Enterprise Micro Grid Project
8 in partnership with Indian Energy.

9 I'd like to commend Commissioner Hochschild on
10 what he said earlier, when he said this is the great
11 implementation. But this is not only the great
12 implementation for California, but for the world. One of
13 the commissioners, Commissioner Gunda, mentioned the
14 effects of what California is doing is affecting the whole
15 of the world. Where you are trying to keep the lights on
16 we are trying in South Africa, just to keep our grid from
17 collapsing.

18 Commissioner Hochschild, I want to tell you that
19 you mentioned that some people hope for you to fail. But I
20 want to say that for every one person that hopes for you to
21 fail, we are tens and tens and thousands around the world
22 that are supporting you. And we will always support you.
23 We want to say on these big (indiscernible) all hands will
24 be on deck. And we will be fully supportive of Indian
25 Energy and yourself.

1 MS. MURIMI: Thank you for your comment.

2 Next we have Sam Garry.

3 CHAIR HOCHSCHILD: If I could I'd just like to
4 respond to that last comment. Thank you so much, sir, for
5 calling in all the way from South Africa. And that's a
6 very special call to get. I used to live in South Africa
7 in the late '90s, two-and-a-half years after Mandela was
8 elected President. And I have to say, it's just wonderful
9 to hear those comments. And we take that to heart, so
10 thank you so much for calling in.

11 MR. GARRY: Awesome, Sam Garry. It's S-A-M, last
12 name G-A-R-R-Y. I partner with the Uneva Energy Group.
13 And thank you, first of all Commission, for taking the time
14 today. I know it's been a long day, so I will try to keep
15 my comments very brief as I am not the speaker that some of
16 those that have already spoken on this matter are. But
17 would just like to express my wholehearted support for the
18 project. We are a consultant, a financial consultant for
19 micro grid developers and independent power producers in
20 California and across the nation. So we've seen many
21 projects like this.

22 And we've been brought on to help Indian Energy
23 with their tax equity investments on this project. So very
24 familiar with both the project and Indian Energy. Just
25 throughout the process we have been extremely impressed

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1 with Indian Energy, their level of professionalism, their
2 technical know-how, and their ability to execute on every
3 commitment that they make.

4 Additionally, we're really excited for this
5 particular project. Its ability to bring to market some
6 really new technologies that are really exciting, I think
7 will play a very important part in California's future and
8 the future of the nation as well as a transformative
9 project for the Viejas tribe. So very excited to offer our
10 support for the project and the grant as well. Thank you.

11 MS. MURIMI: Thank you.

12 Next we have Micah Sussman, please state and
13 spell your name, give your affiliation. You may begin your
14 comment.

15 MR. SUSSMAN: Micah, M-I-C-A-H, Sussman, S-U-S-S-
16 M-A-N. I'm Micah Sussman. I'm the Vice President of
17 Development for Fellowship Energy. Fellowship Energy is a
18 renewable energy developer, financier and asset owner with
19 a nationwide development portfolio in solar plus storage
20 and standalone storage projects.

21 First and foremost, I want to voice my
22 wholehearted support for the approval of this grant on
23 behalf of Indian Energy and the Viejas band of Kumeyaay
24 Indians. I don't think there's anything I can actually say
25 that would sound anywhere near as good as what Erik said

1 about this project and the benefits it will have for this
2 for this specific tribe and region. But rather, I'd like
3 to focus my comments on our relationship and interaction
4 with Indian Energy and this project.

5 When you first interact with Indian Energy, every
6 single member of that organization is very humble about
7 what they're capable of and what they've done. But it
8 belies a technical know-how that that rivals many of the
9 largest developers I've ever interacted with. This group
10 is a powerhouse of expertise. But what makes them much
11 more valuable as a developer is that they understand where
12 their expertise ends and where someone else's begins. And
13 they have brought partnerships to this project that have
14 launched it into a different location.

15 And getting to the stage where financing is
16 happening, projects are moving forward, this is a fully-
17 baked project is something that takes a level of know-how
18 and intellect that is world class.

19 And so you know this project has implications
20 well beyond just the Viejas. I know that it's been said
21 before, but this is -- with this grant it is set to be a
22 project that can be repeated over and over again as a
23 springboard for other projects with other tribes that are
24 similar.

25 And so again, I want to just put our support

1 behind this. And voice that we do think that they should
2 get approved for Indian Energy and the Viejas.

3 MS. MURIMI: Thank you.

4 Next we have "Call-in User 2." Please state,
5 spell your name, give your affiliation. You begin your
6 comment.

7 MR. UHLER: Hello, Commissioners, this is Steve
8 Uhler. I fully support this type of a project. I'm hoping
9 that I'll find out more about whether or not they'll use DC
10 directly. Something that Edison long ago saw as a
11 solution, particularly in a situation that we've learned a
12 whole lot about chemistries. Chemistries these batteries.
13 Chemistries of solid state devices to make light.
14 Situations where you don't have to have electricity that as
15 some people call doesn't sit still, alternating current.
16 Be there, be ready, and be safely used in a facility like
17 this. Whether or not any of these batteries have a
18 connector on the end that happens to plug into a car, or
19 any other type of device that could accept a charge such as
20 these portable power stations, any which way to show that
21 these systems can be used and are highly effective.

22 So thank you for this opportunity to comment.

23 Bye.

24 MS. MURIMI: Thank you.

25 And with that, Chair, there are -- oh, we have

1 one more commenter, apologies. S. Butta, B-U-T-T-A.
2 Please state and spell your name, give your affiliation.
3 You may begin.

4 MR. PUTTA: Yes. Hi, everyone. My name is
5 Sampath Putta. So I have a couple of questions to the
6 Viejas presentation, the Indian Energy. And I have not
7 seen any slides about the efficiency comparison and the
8 number of cycles that can be charged and discharged for
9 these standalone systems. Could somebody please clarify?

10 The reason I asked this question is because most
11 of the ion energy systems in comparison with other kinds of
12 energy storage systems like battery, lithium ion batteries,
13 they have a fixed lifecycle of charging and discharging.
14 And they have a bottleneck of the charging percentage to
15 which a system can be fully utilized. So if you can
16 clarify on those details, that would be very helpful.

17 Thank you again, for the great presentation. And
18 I look forward for the team, the Commissioners' team to
19 approve it, because I fully support the idea behind
20 alternative storage systems. So thanks and looking forward
21 to an explanation about the efficiency and the cycle times.
22 Thank you.

23 MS. MURIMI: Thank you.

24 Chair, with that there are no more comments.
25 Back to you.

1 CHAIR HOCHSCHILD: Well, thank you so much. I
2 really want to thank all the stakeholders for sharing your
3 comments and thoughts. And I want to begin by just
4 acknowledging the Viejas and the Kumeyaay Indians. And I
5 just want to say, you know, the relationship that the
6 tribes have had to government over the last several 100
7 years, the United States has been, you know defined by
8 genocide at first. Then I think defined by fighting
9 dislocation from land. And then in many cases fighting
10 terrible projects being put on tribal lands and to be able
11 to be here today. Forwarding a project that's positive,
12 that represents clean energy that's a model for the state
13 and the country with an innovative new technology is really
14 exciting. It's a big milestone. And I want to thank all
15 of you for being a part of that.

16 I do believe in my heart that the problems our
17 world faces today are principally from the departure that
18 humanity is made. From that basic Native American wisdom
19 of always asking what every decision you make will impact
20 seven generations from now. We have to get back to that.
21 And I think part of the way we do that is more engagement
22 with tribes like we're doing today.

23 This kind of stuff is personal for me. It's
24 important. It's a priority for me. It's a priority for
25 all of us on the Commission. It's a priority for the

1 Governor. So I do want to thank all of you.

2 I want to recognize our amazing Travel Advisor,
3 Katrina Leni-Konig. And we are pushing forward to elevate
4 this type of activity with tribes even more. We funded
5 seven tribal micro grids around the state. As you all
6 know, we have 150 Native American tribes in California,
7 more than any other state in the country. And we want to
8 support tribal energy sovereignty. That's a goal we have
9 in every way, not just for energy storage, but through
10 micro grids. Through like the electric vehicle chargers,
11 through energy efficiency, and really help deliver more
12 progress like we're doing today.

13 I want to also recognize in particular, Mike
14 Gravely, my advisor who has worked incredibly hard on this
15 for many, many years. This is a culmination really of his
16 career at the Energy Commission. And taking some of the
17 learnings we've had from many, many other chemistries that
18 we've invested in, and really now taking the next step to
19 bring this technology category, long-duration storage, into
20 the mainstream, into the market, it is time. And so I
21 fully endorse this strategy. I think this is the gateway
22 for how we build a whole new industry.

23 I do want to say again it's an incredible
24 achievement to have increased by 15 fold energy storage on
25 the grid from 2019. It was 200 megawatts where to today

1 where it's 3,600 megawatts. That's entirely four-hour
2 lithium ion capacity, okay? And I think there are risks
3 and being entirely in one chemistry. This de-risks that.
4 This has some different attributes that are good for the
5 state, and are going to help make us a success.

6 Electricity service should be understood to be
7 like water. It's a utility you require, people require it
8 for medical devices, for refrigeration, we have to have it
9 be completely reliable. And that's something we absolutely
10 can do. I do not believe these, you know, cynics and
11 naysayers who are saying the grid cannot be reliable. This
12 is a solvable problem. And today's project is yet another
13 important milestone in helping shore up that reliability
14 and helping us decarbonize the grid.

15 And what we're trying to do here, ultimately as
16 we get to 100 percent clean energy, is electrify almost
17 everything. And we're, as I mentioned, adding almost 1,000
18 electric vehicles a day. We're electrifying the building
19 sector, rail, and so many other sectors of our society and
20 bringing that clean electricity to places it's never been.
21 And that's really exciting. We are on the cutting edge of
22 that in California.

23 You are all a part of this movement. And it
24 requires all of us in government and stakeholders and
25 tribes, and private industry, innovators, academic

1 institutions coming together. But I think this is a
2 turning point year in this effort. We're putting more
3 resources now into these solutions than we've ever done,
4 than any state has ever done.

5 And again, I want to highlight when we do this
6 stuff there are people who dismiss it as mythology, okay.
7 And just remember, we have heard that before, all right?
8 This is what they said about solar. I came up with the
9 solar industry, all right? People thought that was a niche
10 tech, that's now the lowest cost source of electricity on
11 the market and the fastest growing energy industry in the
12 world. Wind is right there as well. All right, and we're
13 now going -- we have 21 states with mandates for 100
14 percent clean electricity. President Biden set that as the
15 goal for the country. I absolutely believe we're going to
16 get there, but energy storage and long-duration energy
17 storage has a really important role in that. So remember
18 this day, this is a big one. This is a big step.

19 Mike, I want to thank you for all your work. You
20 have put your heart and soul in this work, nights and
21 weekends. And you know this, but you've been -- this
22 particular program, you know, we wanted to give this money
23 a year-and-a-half ago, and finally got it out the door in
24 July.

25 And I do want to say I understand there's some

1 resistance some of these early projects being funded at
2 this level. I fully support this. I think it's the right
3 strategy. There is a whole 'nother wave of funding coming
4 including, I believe about 30 million, in December.
5 There'll be competitive solicitation. Another round in
6 July and more as well. And we're going to get this done
7 this. This is a top priority for us at the Energy
8 Commission to support this. It is for the Governor, the
9 Governor's Office as well, and all of our sister agencies.

10 So a really exciting moment. And I would welcome
11 any Commissioner comments. Yeah, Vice Chair Gunda, please.

12 VICE CHAIR GUNDA: And thank you, Chair. I just
13 wanted to lay out a couple of things here. First I want to
14 start by thanking Mike, thanks for your work on this. And
15 Erik, thank you for the briefings and kind of going through
16 the discussions and with the comments we've received and
17 how best to navigate the process. So I really commend your
18 work. It's a lot of work to be done, and you keep showing
19 up and make it happen. So just thank you for that. And
20 also doing it thoughtfully and respectfully, which is a
21 humongous ask on top of that.

22 And I really look to the commenters today. And
23 congratulations to the Indian Energy for this proposal. I
24 look forward to supporting it.

25 And I just wanted to make a couple of comments on

1 the importance of the long-duration storage, specifically
2 as a technology. Thanks Chair, for putting together the
3 workshop in April. Just kind of thinking through that some
4 of the early results show that we might need long-duration
5 storage as early as 2024. And we really don't have a lot
6 of chemistries to help scale that.

7 And for those of you who are tracking we have
8 about gigawatt that CPUC authorized. It's actually two,
9 but about a gigawatt that would be used for potentially
10 long-duration storage, and that they're expecting to come
11 on line by 2026. So this technology has to scale, and we
12 have to do everything we can to scale this technology. So
13 thank you for all your work. And thank you for you know --
14 I can't reframe what the Chair said in terms of the energy
15 solidarity and just making sure the tribes are able to get
16 the necessary support from the state. It's a priority for
17 the state, a priority for the Commission. And it's
18 wonderful to see projects like this and I look forward to
19 supporting it. Thank you.

20 CHAIR HOCHSCHILD: Commissioner Monahan?

21 COMMISSIONER MONAHAN: Well, I want to thank the
22 tribal members who have journeyed here and spent the entire
23 day paying attention to this what can be a very long set of
24 business meeting items.

25 And I had the pleasure of visiting the tribe.

1 Katrina Leni-Konig organized together with our then Public
2 Advisor Noemi Gallardo, a trip. And I was blown away with
3 what I heard, the vision. I mean, I've got to say Erik, I
4 don't think I've ever heard of a CEO who spoke so cogently
5 and passionately about clean energy, and how important that
6 is to the bottom line. And how electricity prices are
7 rising and electricity is not reliable. And you need to,
8 to both for the sake of the casino and the community around
9 the casino, to really make sure that you have a resilient
10 energy system. And you're doing this with thoughtfulness
11 about the community, and really trying to make sure you're
12 doing all you can to support your community.

13 And it was just really powerful to be there. I
14 would recommend all the Commissioners go. It's just, I was
15 like I've never been so inspired in a visit.

16 So and I think as the Chair said, the US
17 government has a long history of doing nefarious things to
18 tribal members. And to be able to support a tribe who's
19 really looking forward to the future, and trying to do the
20 best things for your community maybe is a divergence from
21 what the US government has done, and the California State
22 Government has done in the past. But our Governor is
23 committed to this. We're committed to this. And it's just
24 a very exciting program. And the fact that we'll actually
25 be able to see results in a year is also amazing.

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1 CHAIR HOCHSCHILD: Thank you, Commissioner
2 Vaccaro?

3 COMMISSIONER VACCARO: Yes, thank you. I just
4 wanted to recognize the words that you use, Chair. I think
5 it's really important, two important things you made clear.
6 That we all, each of us as Commissioners care about this.
7 We care about these types of projects. And that doing our
8 part for tribal energy sovereignty is critical. And it's
9 really a top priority. You mentioned that and I just
10 wanted to underscore. I want people to hear it from each
11 of the each of the five of us. This is something that we
12 are very much committed to and really pleased for the work
13 that you've done, Mike, and for this project that is before
14 us. I definitely support it and look forward to the vote.

15 CHAIR HOCHSCHILD: Commissioner McAllister?

16 COMMISSIONER MCALLISTER: Yeah, I just couldn't
17 agree more with the comments about the history and the
18 historical context. And sort of the really the ethical and
19 moral component of this, which is very strong and needed.
20 And we definitely should not ignore.

21 And, you know, I would love to see -- so this is
22 a demonstrative project that I think will -- the dynamic
23 often is, you know, local entities specific projects,
24 really show us what's possible. And we and others can
25 build on that going forward. And I think you're absolutely

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1 doing that in myriad ways, so including this project.

2 And the vision long term, is that we have this
3 reliable grid where we've optimized investments. And we
4 sort of at all scales, and that we do the right thing to
5 enhance reliability, but without gold plating the system.
6 And we have a huge diverse state geographically and
7 culturally. And I think this is just, again a very
8 demonstrative example of where we're going as a state. And
9 we need that subtlety, but also that scale. And so this
10 project is just important, and will blaze a trail that
11 many, many others will follow across the state and beyond.

12 I did appreciate that presentation. And, Mike,
13 thanks a lot for while I was far afield helping me get an
14 iterative briefing on this. And, you know, acknowledging
15 sort of the process going forward, and really looking to
16 both highlight innovative projects and scale those up. But
17 at the same time we look for competitive opportunities as
18 well. I think the balance is really good.

19 So just process wise I think the vision going
20 forward is correct. So I want to bring up those issues.
21 But thanks a lot.

22 VICE CHAIR GUNDA: Chair, can I?

23 CHAIR HOCHSCHILD: Yes, go ahead.

24 VICE CHAIR GUNDA: As a part of I think the
25 opportunity here to just remind, especially I think CESA

1 mentioned the opportunities for other technologies, and
2 also Indian Energy today here, and others listening. We do
3 have a large amount of money in the distributed assets
4 side, which could be used for some of these projects, micro
5 grids that could support reliability and resiliency. So I
6 just wanted to put that out there as further opportunities
7 for expanding our investments. Thank you.

8 CHAIR HOCHSCHILD: Great. With that is there a
9 motion on Item 13, Vice Chair?

10 VICE CHAIR GUNDA: Yeah, move Item 13.

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

13 COMMISSIONER VACCARO: Second.

14 CHAIR HOCHSCHILD: All right, all in favor say
15 aye.

16 Vice Chair Gunda?

17 VICE CHAIR GUNDA: Aye.

18 CHAIR HOCHSCHILD: Commissioner Vaccaro?

19 COMMISSIONER VACCARO: (No audible response.)

20 CHAIR HOCHSCHILD: Commissioner McAllister?

21 COMMISSIONER MCALLISTER: Aye.

22 CHAIR HOCHSCHILD: Commissioner Monahan?

23 COMMISSIONER MONAHAN: Aye.

24 CHAIR HOCHSCHILD: And I vote aye as well, Item
25 13 passes unanimously, congratulations.

1 MR. GRAVELY: (Indiscernible.)

2 CHAIR HOCHSCHILD: Please.

3 MR. GRAVELY: I would like to just close by
4 saying that this was a real team effort: the Chief
5 Counsel's Office, the Executive Office, the Siting
6 Division, the R&D Division, Accounting, I mean, the Grants
7 Office. I know you thanked me, but it was a team effort.
8 And all of us were running at a high pace. So just thank
9 you very much. But I just wanted to recognize the fact that
10 this was an example of all of us working together and
11 getting it done in a timely manner. Thank you, sir.

12 CHAIR HOCHSCHILD: Yeah, if we can have a round
13 of applause for all the staff who worked on it. Thank you.
14 Thank you all, and thanks to our amazing Chief Counsel.

15 And with that we'll turn out Item 14, the Latino
16 Equity Advocacy and Policy Institute, LEAP Institute. Go
17 ahead.

18 MR. GRAVELY: Okay. Going on, Chair and
19 Commissioners. I'm Mike Gravelly again from the R&D
20 Division.

21 I just want to point out that the EPIC program
22 released a solicitation about a year-and-a-half ago called
23 the Mobile Renewable Backup Generation System, MORBUGS.
24 And the goal was to find ways to replace diesel and gas
25 generators, in particular on a smaller scale, with clean

1 energy solutions. We selected seven grants, six of those
2 grants have already been before this Commission and been
3 approved. This is the last, this is the seventh grant from
4 that area. And I just want to go through briefly the value
5 of that. Next chart.

6 And everybody knows how difficult it is for us.
7 Indeed, again the use of diesel generators or expansion of
8 diesel generators with some of the current issues we've
9 been having, these MORBUG systems provided reliability or
10 resiliency that we're looking for. They provide safety,
11 because they're now operating in a clean environment and
12 they don't have the pollution. They don't have the fire
13 impacts that you would have with some of these systems in
14 the field. And so they're reducing emissions.

15 And also this one we'll show, has an equity
16 investment, because we are doing this and not only testing
17 it in a disadvantaged community, but disadvantaged
18 community is a major part of this project. Next chart.

19 So the LEAP project was developed here to put
20 together a simple, easy to deploy easy to manage, and easy
21 to deploy system. This one is a solar with storage. The
22 panels are set up, it's a 12 kilowatt system. So it's
23 basically replacing a small transportable diesel or gas
24 generator, that you would bring with a whole bunch of
25 diesel and gas. This system can run for 12 to 14 hours a

1 day. It provides service to emergency first responders
2 whether they are fire department, nursing, police
3 department coordination, medical. And so the system is
4 designed to do that. And again, it is designed to be easy
5 to deploy, easy to manage and easy to return.

6 I do think it's important to mention that we're
7 going to be testing this in different climate zones. And
8 one of the things we're trying to do with all these MORBUGS
9 is we're working with the State's Office of Emergency
10 Service and the utilities to try and integrate some of
11 these into projects, demonstrations that they're doing,
12 evaluations they're doing to show how we can replace some
13 of these diesel systems with clean alternatives.

14 It is also important to mention here that the
15 system will be managed by a disadvantaged community based
16 organization. And that the system will be assembled,
17 tested, deployed and managed by the residents of that
18 disadvantaged community. And with the next chart.

19 With that, we're asking for approval for this
20 grant and the adoption of staff's determination that the
21 project is exempt from CEQA. And I believe (indiscernible)
22 but I believe we have potentially a speaker from the LEAP
23 Institute online that would like to make a few comments.

24 CHAIR HOCHSCHILD: Thank you. We'll go to public
25 comment on Item 14.

1 MS. MURIMI: Thank you, Chair.

2 For individuals that are in the room, go ahead
3 and use the QR codes located in the back of the room. And
4 for individuals on Zoom, use the raise-hand feature. And
5 for individuals that are calling in, please press * 9 to
6 indicate that you'd like to make a comment.

7 We'll start with individuals on Zoom, seeing none
8 in the room. Rey Leon, please state and spell your name,
9 you may begin your comment.

10 MR. LEON: Hello, good afternoon. My name is Rey
11 Leon, Executive Director, and Founder of the LEAP
12 Institute. Greetings to all of yours out there in
13 Sacramento. I'm here in the heart of the valley here out
14 on in California. And looking forward, moving this project
15 forward. We've been I guess, just holding on and waiting
16 for this opportune moment.

17 To get it going, we're coupling this with another
18 program that we got with a Workforce Development Board.
19 And so essentially what we're doing is bringing innovation
20 and equity together in one of the poorest cities in the
21 State of California. Here out in California, it's just so
22 happens that four of those poor cities are in Fresno
23 County, which has one of the highest ag revenue counties in
24 the State of California.

25 So because of the fact that the drought hitting

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1 as hard as it is, and no longer can we look forward to the
2 8,000 migrant farmworkers every lettuce season, our economy
3 has really been pretty bad. And so our intent is to build
4 up the skills and so that we could develop the environment
5 to build up an industry that is renewable. Because if
6 we're not going to be able to grow the crops that we've
7 grown, and empower the local economy in that fashion, you
8 know, it's going to be difficult.

9 And thousands of acres in our area are also going
10 either to solar or to almond orchards. And then at the end
11 of the day, they're not as labor intensive. After you
12 build the Solar Park, the labor intensity is down. The
13 almond orchards and pistachio orchards are have always been
14 low intensity due to the technology used. And all the
15 other crops, technology as you may imagine, is it's coming
16 up and taking out jobs. And so we are hoping that with
17 this project, we're not only able to build skills to employ
18 people to build them, hopefully we could commercialize
19 them. And keep on building them for entities throughout
20 the state and beyond.

21 And to maintain those jobs grow more jobs, but
22 also grow the interests in innovative technologies and
23 clean energy with the youth, because the Ag jobs are no
24 longer going to be around. It's going to be up to us to
25 build and make sure that young people have access,

1 equitable access to quality education.

2 And I know I'm going off on a tangent. It's just
3 the picture that I got in my head is more than one program.
4 You know what I mean? But this is definitely one of those
5 pillars to help my city and the surrounding communities on
6 the west side, and around the most part for farmworker
7 family oriented to bridge over to the future that is about
8 technology. That is about climate resiliency. And just
9 figuring out how to keep on just employing and empowering
10 with equity in mind.

11 And of course in getting rid of the carbon
12 footprint that has not been positive, because also it's
13 pollution spewing right. And the Silicon Valley is still
14 one of the most contaminated air bases in the nation. So,
15 so yeah, we're just trying to dot a lot of "I"s and cross a
16 lot of "T"s out here.

17 CHAIR HOCHSCHILD: Thank you so much, Rey, and
18 congratulations on your clean power Champion Award. It's
19 nice to have a celebrity like you call in and grace us with
20 your presence.

21 Is there any other public comments on this item?

22 MS. MURIMI: Yes, Chair. We have "Call-in User
23 2." Please state and spell your name, give your
24 affiliation, you may begin your comment.

25 MR. UHLER: Hello, Commissioners. This is Steve

1 Uhler. I have an interest in this type of product, but I'm
2 having a hard time ascertaining where the money goes on
3 this. This is a fairly common product that can be bought
4 on Amazon out of the box. There's a lot of them made. I
5 in fact (indiscernible) my lunch on a system that's very
6 much similar to this. It's smaller. I also take that
7 camping. I no longer use fossil fuels camping. But could
8 somebody clarify how many of these will be built for this
9 grant? I would like to make further comment after knowing
10 what that number is?

11 MR. GRAVELY: (Indiscernible.)

12 MS. MURIMI: Apologies. Could you state that
13 again, closer to the mic?

14 MR. GRAVELY: That's how my speakers are. So I'm
15 sorry, yeah. So there will be four systems built, and they
16 will be tested in four different locations. And as part of
17 exercises we mentioned before, so these are -- all of the
18 MORBUGs systems were designed to do three different climate
19 zones in four different systems. Okay.

20 MS. MURIMI: And with that, Chair, there are no
21 more comments in the room.

22 CHAIR HOCHSCHILD: Okay. Well, I'm in full
23 support of this. Thank you so much for all the work.
24 Unless there are other Commissioner comments, I'd -- Yes.
25 Go ahead, Commissioner Monahan?

1 COMMISSIONER MONAHAN: I just want to build on
2 what you said share about Rey Leon being a real leader in
3 this space, just always kind of pushing the edges of what's
4 possible. He's already done with electric vehicles and
5 just the expansive vision of really trying to help a city
6 like Huron make money, clean the air, and be part of this
7 clean energy revolution.

8 CHAIR HOCHSCHILD: Well said, would you be
9 willing to move Item 14?

10 COMMISSIONER MONAHAN: I move Item 14.

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

13 COMMISSIONER MCALLISTER: Second.

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

16 COMMISSIONER MONAHAN: Aye.

17 CHAIR HOCHSCHILD: Commissioner McAllister?

18 COMMISSIONER MCALLISTER: Aye.

19 CHAIR HOCHSCHILD: Vice Chair Gunda?

20 VICE CHAIR GUNDA: Aye.

21 CHAIR HOCHSCHILD: Commissioner Vaccaro?

22 COMMISSIONER VACCARO: Aye.

23 CHAIR HOCHSCHILD: And I vote aye as well. Item
24 14 passes unanimously.

25 We'll turn now to Item 15, Zero-Emission Drayage

1 Truck and Infrastructure Pilot Project.

2 MR. PERRY: Good afternoon. How's it coming from
3 the mic? Sounds good, okay.

4 Good afternoon, Chair and Commissioners. My name
5 is Marc Perry, and I am an Energy Commission Specialist in
6 the Medium- and Heavy-Duty Zero-Emission Technologies
7 Branch of the Fuels and Transportation Division. Today, we
8 are seeking approval for two agreements with San Joaquin
9 Valley Air Pollution Control District, resulting from the
10 solicitation "Zero-Emission Drayage Truck and
11 Infrastructure Pilot Project."

12 In November of 2020, the California Energy
13 Commission and the California Air Resources Board, CEC and
14 CARB, respectively, released their first-ever collaborative
15 grant funding opportunity to support large scale projects
16 where CARB will provide funding for zero-emission, on-road,
17 class 8 trucks. And the CEC will provide funding for the
18 infrastructure necessary to support the deployed trucks, in
19 addition to workforce training and development.

20 Two of those agreements from this GFO have
21 already been approved at a previous business meeting and
22 are underway. And one remaining agreement will be
23 presented at a future business meeting. Next slide,
24 please.

25 Class 8 drayage and regional haul trucks make up

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1 only a small percentage of total vehicles on the road, but
2 they have a huge air quality impact on communities living
3 and working near heavily trafficked roadways.

4 The infrastructure that will be deployed as a
5 result of these two awards is expected to support 100 new,
6 zero-emission, Class-8, regional haul trucks in Northern
7 and Central San Joaquin Valley. The projects' benefits
8 will include reduced emissions that will result in
9 increased public health and safety, even to those
10 communities beyond the immediate project sites, most of
11 which are located in SB 535 disadvantaged communities and
12 AB 1550 low-income areas.

13 Additionally, the projects will increase economic
14 development outcomes throughout the San Joaquin Valley
15 through the creation of construction jobs that will be
16 paying prevailing wages as required by state law. Both
17 projects will conduct regional workforce training and
18 development for both truck and infrastructure repair and
19 maintenance.

20 Furthermore, these projects will show the
21 feasibility of large-scale infrastructure projects that
22 will be able to provide best practices and key lessons
23 learned for resiliency and future replicability. The
24 proposed projects will help other freight transportation
25 fleets understand which technology may work best for their

1 particular duty cycles and driving environments. Which
2 will ultimately accelerate meeting Governor Newsom's
3 Executive Order to transition California's entire drayage
4 and regional haul fleets to zero-emission by 2035. Next
5 slide, please.

6 Item 15a. The first proposed grant is for
7 \$10,348,873 for agreement ZVI-22-014. The goal of this
8 agreement is to design, construct, and deploy at least 25
9 direct current fast chargers, a photovoltaic distributed
10 energy resources system, and a battery energy storage
11 system to support 50 Volvo VNR electric trucks at a major
12 grocery store distribution center in Tracy. Next slide,
13 please.

14 Item 15b. The second proposed grant is
15 \$4,550,710 for agreement ZVI-22-015. The goal of this
16 agreement is to design, construct, and deploy at least
17 eight direct current fast chargers and a battery energy
18 storage system to support 50 Tesla Semi electric trucks at
19 major soft drink distribution center in Fresno. Next
20 slide, please.

21 Staff recommends approval of these two grant
22 agreements, and also recommends adoption of staff's
23 determination that these two actions are exempt from CEQA.

24 Thank you all for your time and consideration of
25 these items. That concludes my presentation. I am

1 available to answer any questions. Jason Crow, Manager at
2 CARB, and Michael Ippolito from Volvo Trucks North America
3 are available on Zoom to answer any questions, as well as
4 representatives from San Joaquin Valley Air Pollution
5 Control District and Tesla.

6 CHAIR HOCHSCHILD: Thank you so much, Marc.

7 We'll now to public comment on Item 15.

8 MS. MURIMI: Thank you, Chair. Again, for
9 individuals that are in the room, utilize the QR codes in
10 the back of the room. For individuals on Zoom go ahead and
11 use the raise-hand feature. It looks like an open palm at
12 the bottom of your screen. And for folks calling in, go
13 ahead and press * 9 to indicate that you'd like to make a
14 comment.

15 We'll start with Jason Crow. Please state and
16 spell your name, give your affiliation. You may begin your
17 comment.

18 MR. CROW: Good afternoon. I'm Jason Crow.
19 That's J-A-S-O-N, last name C-R-O-W. And I'm with the
20 California Air Resources Board. And I just like to say a
21 few words today about the close collaboration between CARB
22 and the California Energy Commission on what has been our
23 very first joint solicitation.

24 This has truly been a first of its kind
25 partnership between our agencies, and has resulted in the

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1 selection of five projects in total with over \$63 million
2 in funding from CARB and just over \$44 million from the
3 Energy Commission. Also leveraging an additional \$138
4 million in total match. \$24 million of CARB's funding
5 comes from the California Climate Investments with an
6 additional \$40 million appropriated by the Legislature in
7 fiscal year 2021-'22.

8 And as mentioned, funding supports both the South
9 Central Fresno Pepsi Delivery Truck Electrification Project
10 and the Grocery Operations For Carbon Emission Reductions
11 or GROCER Project. Both projects now have CARB grant
12 agreements in place and we're excited to see this project
13 come before the Commission today.

14 Full deployment of all 50 trucks for the Pepsi
15 project is expected by June of 2023. And for the GROCER
16 project, full deployment of the 50 trucks is expected by
17 June of 2024.

18 Large scale pilot projects like these helped to
19 set the stage for even bigger benefits over the coming
20 years, as commercialization of the next generation of zero
21 emission technologies, supports the larger transformation
22 away from fossil fuels. And toward a zero emission future
23 in California.

24 These investments help support Executive Order N-
25 79-20, providing more commercial options to meet the goals

1 of transitioning all trucks and drayage service to zero
2 emission by 2035. And the broader on-road commercial
3 trucks transitioning to zero emission by 2045.

4 California continues to lead the way in funding
5 advanced technology, resulting in direct greenhouse gas
6 emission reductions. We will keep working closely with our
7 partners to expedite deployment of zero emission
8 technologies through innovative incentives and regulations.
9 And we look forward to continuing to build on the
10 successful partnership. Thank you.

11 MS. MURIMI: Thank you.

12 Next we have Brian Dodds. Please state and spell
13 your name, give your affiliation. You may begin your
14 comment.

15 MR. DODDS: All right, thank you. My name is
16 Brian Dodds, B-R-I-A-N D-O-D-D-S. I'm a Program Manager in
17 the Grants and Incentives Department at the San Joaquin
18 Valley Air Pollution Control District. I'd like to take
19 just a brief moment to thank the CEC for their
20 consideration of these awards. And thank Mr. Marc Perry,
21 and Katherine Reed, who we've worked with primarily, but
22 recognize that there's a lot of effort that goes into these
23 awards. We appreciate the collaboration with CARB, with
24 our District and our project partners. And we really look
25 forward to implementing these projects here in the Valley

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1 where this type of activity and work and support is very
2 much needed.

3 Again, we appreciate it. And we can't wait to get
4 these projects going. Thank you.

5 MS. MURIMI: Thank you for your comment.

6 Next we have Emily Conway. Please state and
7 spell your name, give your affiliation. You may begin.

8 MS. CONWAY: Hello, this is Emily Conway, E-M-I-
9 L-Y C-O-N-W-A-Y. I'm the Senior Fleet Sustainability
10 Manager for Pepsi. We will be completing the South Central
11 Fresno Pepsi Delivery Truck Electrification Project in
12 partnership with San Joaquin. Our project to electrify 50
13 Local Pepsi delivery tractors will reduce tailpipe
14 emissions in the AB 617 South Fresno community. Thank you
15 so much for your consideration. And we're here to answer
16 any questions that you may have.

17 MS. MURIMI: Thank you.

18 And with that, Chair, there are no more
19 commenters and -- Oh, one more commenter, apologies. S.
20 Butta, please state and spell your name. Give your
21 affiliation. You may begin your comment.

22 MR. PUTTA: Hi, everyone. My name is Sampath
23 Putta. I would like to know a few things about this
24 proposal. First one, is may I know what is the company
25 that is making these trucks? Are you converting the

1 existing fuel-based, gasoline-based trucks into electric
2 trucks or you are purchasing all them together and then
3 building charging systems for that (indiscernible)?

4 MS. MURIMI: Thank you.

5 MR. PERRY: The trucks are not re-powers. They
6 are all fleet lines. They are the Volvo VNR electric and
7 the other one is the Tesla Semi.

8 MS. MURIMI: And with that, Chair, there are no
9 more comments. I hand the mic back to you.

10 CHAIR HOCHSCHILD: Thank you. Let's go to
11 Commissioner discussion starting with Commissioner Monahan.

12 COMMISSIONER MONAHAN: Well, I just want to
13 congratulate both the CEC and the CARB teams. And that's
14 Marc and Jason Crow as well as the Chief Counsel's Office
15 in both organizations. I mean, this -- I know it's hard to
16 relay. The fact that this is the first ever solicitation
17 that we've done jointly with CARB just says a lot about how
18 hard it is to go through all these barriers to make
19 collaboration happen. And how much it takes a commitment
20 from both organizations to try to make it as easy as
21 possible for the outside world to get grants for both
22 vehicles and infrastructure simultaneously and to be come
23 at it from a whole of government approach. So I just want
24 to emphasize that this was a lot of work behind the scenes,
25 and I'm so happy that the teams were able to do this.

1 So and especially in this particular sector,
2 where we know it has tremendous impacts for air quality and
3 for local communities. And so just this is a great
4 collaboration. And I want to thank everybody for their
5 hard work in making this happen.

6 CHAIR HOCHSCHILD: Thank you. Unless there's
7 other Commissioner comments would you be willing to move
8 the item?

9 COMMISSIONER MONAHAN: I move Item 15.

10 CHAIR HOCHSCHILD: Commissioner McAllister, would
11 you be willing to second?

12 COMMISSIONER MCALLISTER: Second.

13 CHAIR HOCHSCHILD: All in favor say aye.
14 Commissioner Monahan?

15 COMMISSIONER MONAHAN: Aye.

16 CHAIR HOCHSCHILD: Commissioner McAllister?

17 COMMISSIONER MCALLISTER: Aye.

18 CHAIR HOCHSCHILD: Vice Chair Gunda?

19 VICE CHAIR GUNDA: Aye.

20 CHAIR HOCHSCHILD: Commissioner Vaccaro?

21 COMMISSIONER VACCARO: Aye.

22 CHAIR HOCHSCHILD: And I vote aye as well. Item
23 15 passes unanimously.

24 We'll turn now to Item 16, minutes of the June 8
25 And September 14 business meetings. Do we have any public

1 comment on this?

2 MS. MURIMI: Thank you. Thank you, Chair.

3 So once again, for individuals that are in the
4 room go ahead and use the QR codes located in the back of
5 the room. And for individuals on Zoom go ahead and use the
6 raised-hand feature.

7 We have one commenter, S. Putta, P-U-T-T-A. You
8 may begin your comment.

9 MR. PUTTA: Actually I had a comment about the
10 previous one that just passed. The conversation went
11 abrupt, so I didn't finish my question. Can I continue on
12 that or --

13 CHAIR HOCHSCHILD: No sorry, unless it's germane
14 to this item I'd ask you to patch back in at the public
15 comment at the end. Thank you.

16 MR. PUTTA: Okay.

17 CHAIR HOCHSCHILD: Anyone else, Dorothy?

18 MS. MURIMI: No more comments for this item.

19 CHAIR HOCHSCHILD: Okay. Can we actually take
20 these up and vote once together, for both items?

21 COMMISSIONER MONAHAN: I have to recuse myself
22 because some people were missing for some of these.

23 CHAIR HOCHSCHILD: Yeah. Okay, sorry. That's why
24 we're doing it separately. Thank you.

25 Unless there's other Commissioner discussion do

1 we have a motion on the -- you need to recuse on which one?
2 MS. MURIMI: Or abstain.
3 CHAIR HOCHSCHILD: June 8th or both?
4 COMMISSIONER MONAHAN: June, yes.
5 CHAIR HOCHSCHILD: June 8th. Okay, so --
6 COMMISSIONER MONAHAN: It might be easiest to go
7 by individual.
8 CHAIR HOCHSCHILD: Let's do the June 8th.
9 Commissioner McAllister, will you make a motion
10 for that?
11 COMMISSIONER MCALLISTER: I'll move the June 8th
12 business meeting item on Number 16.
13 CHAIR HOCHSCHILD: Is there a second from
14 Commissioner Vaccaro?
15 COMMISSIONER VACCARO: Second.
16 CHAIR HOCHSCHILD: All in favor say aye.
17 Commissioner McAllister?
18 COMMISSIONER MCALLISTER: Aye.
19 CHAIR HOCHSCHILD: Commissioner Vaccaro?
20 COMMISSIONER VACCARO: Aye.
21 I vote aye as well. That item passes 3-0.
22 CHAIR HOCHSCHILD: And then on September 14th,
23 who is -- (Inaudible.) Okay, so is there a motion for the
24 September 14th business meeting minutes from Commissioner
25 Monahan?

1 COMMISSIONER MONAHAN: I am recusing myself,
2 because I was sick for that. I think that's right.

3 CHAIR HOCHSCHILD: Uh no, the 14th I think you
4 were --

5 COMMISSIONER MONAHAN: September 14th?

6 CHAIR HOCHSCHILD: September 14th.

7 UNIDENTIFIED SPEAKER: She wasn't here.

8 COMMISSIONER MONAHAN: Hang on one second, let me
9 check my calendar. I think there's something wrong about
10 the recusals.

11 CHAIR HOCHSCHILD: Who was it?

12 MS. BARRERA: Commissioner Monahan was sick that
13 day.

14 CHAIR HOCHSCHILD: So she was sick.

15 MS. BARRERA: And Commissioner McAllister was
16 traveling.

17 CHAIR HOCHSCHILD: You were out, I apologize.

18 Okay, so is there a motion on that from Vice
19 Chair Gunda?

20 VICE CHAIR GUNDA: I'll move September 14th
21 business meeting minutes.

22 CHAIR HOCHSCHILD: Okay. And a second from
23 Commissioner Vaccaro?

24 COMMISSIONER VACCARO: Second.

25 CHAIR HOCHSCHILD: All in favor say aye.

1 Vice Chair Gunda?

2 VICE CHAIR GUNDA: Aye.

3 CHAIR HOCHSCHILD: Commissioner Vaccaro?

4 COMMISSIONER VACCARO: Aye.

5 CHAIR HOCHSCHILD: And I vote aye as well. That
6 item passes 3-0.

7 Let's turn now to Item 17. What I'd like to do
8 actually, I have scheduled a second October business
9 meeting on the 24th. We are late. We have a closed
10 session. If there's anything that can't -- absolutely is
11 burning that can't wait until a week-and-a-half from now, I
12 would just leave it open otherwise.

13 Okay, what is that?

14 COMMISSIONER MCALLISTER: So just on the Load
15 Management Standards, lots of people to thank. I left out
16 actually two key people. And I wanted to thank my Advisor,
17 Bryan Early, my Chief of Staff. He has been instrumental
18 in just herding a lot of cats and just connecting dots
19 throughout this process for years now, so I acknowledge
20 him.

21 And I also wanted to acknowledge my previous
22 advisor, Martha Brook for actually giving a lot of creative
23 thinking to this, to that topic. And to just helping sort
24 of begin the process to help it take shape. So anyway,
25 those were omissions I wanted to correct.

1 CHAIR HOCHSCHILD: Thank you.

2 And Vice Chair, you had a quick thing as well?

3 VICE CHAIR GUNDA: Thank you, Chair. I'm going
4 to hold the rest of the comments for the next business
5 meeting, but I do want to just acknowledge another tragic
6 loss to the California Energy Commission family into the
7 world of the passing of Ted Dang, who passed away at an
8 early age of 54 a week-and-a-half ago.

9 Ted joined the CEC family back in May of 2006 and
10 spent 15 years working with us in both the Efficiency
11 Division and the Energy Assessments Division, most recently
12 focused on data collection, analysis and integration. Many
13 of the people that knew him well and worked with him would
14 not only talk about him as a wonderful colleague. But also
15 remark about Ted being such a smart, generous and emphatic
16 person and someone with a contagious smile, which I can
17 attest to, and positive outlook on life.

18 He will be missed by us here at the Energy
19 Commission as well as his family and loved ones. A funeral
20 service will be held this Friday in Fair Oaks.

21 In the meantime, I would like to at least ask us
22 to take a moment of silence to just to honor his memory.

23 (A Moment of Silence Was Observed.)

24 VICE CHAIR GUNDA: Thank you Chair for the
25 opportunity.

1 CHAIR HOCHSCHILD: Thank you. Our condolences to
2 his family.

3 We'll turn now to item 18, Executive Director's
4 Report.

5 MR. BOHAN: Thank you, Commissioners. I'll be
6 very brief. I want to just thank you for all of the
7 acknowledgments you made of all the staff's hard work
8 today, did a lot of big things at this meeting.

9 And I just want to call out and possibly
10 embarrass one other person you didn't call out and that is
11 Noemi. Because I'm so proud of the presentations that our
12 staff give here, but they are as good as they are in no
13 small measure due to Noemi. She works closely with each
14 person. Some don't need much work, but some needs some who
15 haven't had an opportunity to present very much. And I
16 just wanted to acknowledge the in addition to Chief of
17 Staff, in addition to the Public Advisor, she performs this
18 role. So thank you.

19 CHAIR HOCHSCHILD: She is amazing. Her boss is a
20 piece of work, though. (Laughs.) Thank you, Noemi.

21 The Public Advisor's Report, Item 18.

22 MS. GALLARDO: Thank you. I appreciate that,
23 it's very kind.

24 So quickly, as one of I think might be my last,
25 or final Public Advisor Reports, is I wanted to give you

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1 all a heads-up and also maybe a request. So we've done a
2 fantastic job as an agency trying to figure out how to
3 engage more of the public communities, local government
4 leaders, all kinds of people that we want to participate in
5 our proceedings. We've gotten so good that it's going to
6 become a problem, actually. We're starting to hear that we
7 might be overwhelming, inundating, burdening people with so
8 much outreach and are asked for them to engage.

9 So I think we don't stop that, right? We try to
10 come up with a creative solution. So I wanted to inform
11 you because I think a lot of the teams that work for you
12 all and in the divisions are seeking to do roundtables,
13 listening sessions, more workshops, etcetera. And I think
14 we can resolve that feeling of the public if we can think
15 of some creative solutions.

16 So one of them that I wanted to propose to all of
17 you together, is potentially having an informational
18 symposium where we have a public workshop-type of
19 convening. And inform the public about all the various
20 types of efforts that we have going on. So it's an idea
21 that I have. I haven't planned or thought through details,
22 but wanted to propose it to you.

23 And then there may be other ways that we can also
24 alleviate the public and our allies and our partners on our
25 efforts. We do want them to be engaged, but we don't want

1 them to feel overburdened. So I wanted to put that out
2 there. And no need to respond now, I just wanted to let
3 you know. Thank you so much.

4 CHAIR HOCHSCHILD: Thank you so much for all you
5 do.

6 I neglected to make one announcement, which is
7 important. So I'd like to read a statement regarding the
8 gasoline price issue. Following a month of rising prices
9 at the pump the last several weeks have set new records
10 with price spikes amounting to the highest California has
11 ever seen over the last 25 years. These sudden increases
12 in prices at the pump are unacceptable and place an undue
13 burden on California families and businesses.

14 This happened as crude prices remain stable and
15 even slightly decreased and refinery costs and profits
16 nearly tripled since the end of August. We know
17 maintenance and operations are affecting these costs as
18 well. But there's a lot more Californians deserve to know,
19 and I sent a letter to the industry nearly two weeks ago
20 asking for such. The explanations in the responses vary
21 and the solutions are sparse, not an acceptable outcome for
22 consumers.

23 That's why I'm asking our staff to organize a
24 workshop, which we've tentatively scheduled for November
25 29th to have public dialogue as a step in better

1 understanding the issues. It's critical we move towards
2 tangible solutions around additional safeguards and
3 transparency measures that could be put in place to ensure
4 these dramatic price spikes don't happen again. I expect
5 industry participation and we plan to invite outside
6 experts to weigh in on options in the lead up to the
7 Governor's Special Session in December. More to follow.
8 Thank you for that.

9 With that. Let's go to Item 20, Public Comment.
10 MS. MURIMI: Thank you, Chair.

11 This is for the period for a person, any person
12 wishing to comment on information items or reports of the
13 meeting agenda, or any other item. Each person has up to
14 three minutes to comment and comments are limited to one
15 representative per organization. We may reduce the comment
16 time depending on the number of commenters.

17 After you are called on please restate and spell
18 your first and last names. state your affiliation if any.
19 Attendees, for those in the room use the QR codes located
20 in the back of the room to indicate that you'd like to make
21 a comment. For those joining via Zoom use the raise-hand
22 icon to indicate your interest in making a comment. And
23 for those calling in press *9 to raise your hand and *6 to
24 unmute on your end. Do not use the speakerphone feature,
25 because it will make it hard for us to hear you.

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1 I'll begin with those in the room. Seeing none,
2 I'll move on to Zoom. We have Call-in User 2.. Please
3 state and spell your name and give your affiliation. You
4 may begin your comment.

5 MR. UHLER: Well, Commissioners, this Steve
6 Uhler. There's a number of things I noticed that this
7 meeting. The Chair has yet to answer my question about
8 items that have not been filed for the proceeding being
9 acted upon. Because all documents submitted in any
10 proceeding, whether by party, Commission, the Committee,
11 Commission or any individual, shall file with the Docket
12 Unit.

13 Now I wasn't able to ascertain a piece of
14 information I had asked a question. I wasn't allowed to
15 continue with my comment, because I now have to look over
16 two places to find this. It seems like a simple thing.
17 You should put everything in the docket.

18 Another area, where are the '17 through '20 RPS
19 reports? I ascertained from staff that that's not done
20 yet, yet you've had a docket open for over a year. And
21 that still only has one item in it, the opening of the
22 docket. I want to know what's happening with RPS.

23 None of the -- a lot of people there sound like
24 they'd be happy to go through terabytes worth of data, but
25 I think you should focus on core. You don't even have a

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1 complete list of power plants, yet you're making decisions
2 about building more.

3 You have an Energy Almanac, based on some sort of
4 GIS system. It says -- one friend would call it "whipped
5 cream on horse pucky." There's a lot of bad data in it.

6 You're building something called Solar Screen.
7 (phonetic). Again, a lot of bad data. You know where the
8 substation sits in one place, but you don't know that
9 there's a -- that the reason why it sits there is related
10 to a solar power system.

11 So and also, it takes quite a long time. I had a
12 request in for 1353 data. That's your so-called
13 disaggregated data. It's been in for since 2018. I really
14 want to know the schemas. And also I can see that you
15 weren't able -- your staff was unable to answer a question
16 about behind-the-meter. And that's what 1353 data will
17 have.

18 It's a shame. I went to a workshop. I'm
19 thinking "I brought my computer. I'm going to grab some
20 data. I'm going to show them some techniques that that
21 help industry build stuff very fast and know what's going
22 on." No data. So please see that I get this smart meter
23 data or at least the schema, so that I can complete my work
24 on this. It's taking way too long. Your -- even your load
25 management won't be able to really do anything until half

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1 this decade is over.

2 And also, it appears that you know somebody might
3 figure that the public will have to waive a law for their
4 protection in order to be in these load management programs
5 that you -- nobody's answered the question on the Business
6 and Professional Code.

7 MS. MURIMI: Thank you, your time is concluded.

8 MR. UHLER: With that, all right in closing --

9 MS. MURIMI: Thank you. Apologies. Thank you,
10 your time has concluded.

11 MR. UHLER: Okay, just get my --

12 MS. MURIMI: We have one more commenter, S.
13 Putta, P-U-T-T-A. Please state and spell your name, give
14 your affiliation, and give your comment.

15 MR. PUTTA: Yes. Good evening, Commissioners
16 team. I have a couple of questions about today's
17 presentations. One of them is about Item Number 15. Is
18 there somebody to clarify about Item Number 15 or they have
19 already left? I would like to know first before I ask that
20 question.

21 MS. MURIMI: We can connect you -- oh
22 (indiscernible.)

23 VICE CHAIR GUNDA: Mr. Sampath, I think you
24 should -- we'll provide you the Public Advisor's email
25 address. We'll follow up with staff. Thank you.

1 MR. PUTTA: Okay. And then I have another
2 question related to Item Number 13, about the efficiency.
3 I did raise that question, but nobody has answered and it
4 moved on. So I would like to know if somebody can help
5 answer.

6 CHAIR HOCHSCHILD: Sir, can I suggest -- these
7 are specific questions -- many of those staff are no longer
8 in the room -- that we just do that by email through the
9 Public Advisor? If someone could contact this gentleman
10 and get his questions, we'll get answers.

11 Are there any other public comments, Dorothy?

12 MS. MURIMI: Chair, no more public comment. Back
13 to you.

14 CHAIR HOCHSCHILD: Okay, thanks.

15 We'll turn now to Item 21, Chief Counsel's
16 Report.

17 MS. BARRERA: Thank you, Chair and Commissioners.
18 I'm here to propose that the Commission go into a closed
19 session, as specified in the agenda on Item 21a. and b.
20 The agenda provides notice that the Commission may adjourn
21 to closed session with its legal counsel pursuant to
22 Government Code section 11126(e)(1) to discuss the
23 litigation to which the Energy Commission is a party.

24 In particular, in this closed session we propose
25 to discuss *Okemiri vs the California Energy Commission*.

1 Separately, the agenda also provides notice that
2 the Commission may adjourn to closed session with its Legal
3 Counsel pursuant to Government Code section 11126(e)(2) to
4 discuss facts and circumstances in the following matters
5 that may warrant the initiation of litigation.

6 In particular, the matters we would like to
7 discuss is the *CEC grant agreement with Colony Energy*
8 *Partners, LLC*. The grant agreement is ARV-14-029.

9 And the second matter is *CEC grant agreement with*
10 *Vehicle Grid Integration Alliance*. And the grant agreement
11 number is ARV-14-057.

12 And I promise we'll keep this less than an hour.

13 CHAIR HOCHSCHILD: Thank you. Okay, we're
14 adjourned for closed session, and then we'll come back.

15 (Off the Record at 4:48 p.m.)

16 (On the Record at 5:59 p.m.)

17 VICE CHAIR GUNDA: We returned from a closed
18 session and we have a quorum with Commissioner McAllister,
19 Commissioner Vaccaro, and myself here. So with that, the
20 meeting is adjourned. Thank you.

21 (The Business Meeting adjourned at 5:58 p.m.)

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REPORTER' S CERTIFICATE

I do hereby certify that the testimony in the foregoing hearing was taken at the time and place therein stated; that the testimony of said witnesses were reported by me, a certified electronic court reporter and a disinterested person, and was under my supervision thereafter transcribed into typewriting.

And I further certify that I am not of counsel or attorney for either or any of the parties to said hearing nor in any way interested in the outcome of the cause named in said caption.

IN WITNESS WHEREOF, I have hereunto set my hand this 26th day of October, 2022.



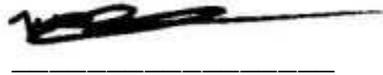
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I do hereby certify that the testimony in the foregoing hearing was taken at the time and place therein stated; that the testimony of said witnesses were transcribed by me, a certified transcriber and a disinterested person, and was under my supervision thereafter transcribed into typewriting.

And I further certify that I am not of counsel or attorney for either or any of the parties to said hearing nor in any way interested in the outcome of the cause named in said caption.

IN WITNESS WHEREOF, I have hereunto set my hand this 26th day of October, 2022.



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