

DOCKETED

Docket Number:	24-BUSMTG-01
Project Title:	2024 Business Meeting Agendas, Transcripts, Minutes, and Public Comments
TN #:	259438
Document Title:	Transcript of the September 11, 2024 Business Meeting
Description:	N/A
Filer:	Kristine Banaag
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	10/3/2024 10:09:07 AM
Docketed Date:	10/3/2024

APPEARANCESCOMMISSIONERS

David Hochschild, Chair

Siva Gunda, Vice Chair

Andrew McAllister, Commissioner

Noemi Gallardo, Commissioner

STAFF PRESENT

Drew Bohan, Executive Director

Lisa DeCarlo, Acting Chief Counsel

Sean Lockwood, Reliability, Renewable Energy &
Decarbonization Incentives Division

Claire Petersen, Commissioner McAllister's Office

Charles Smith, Fuels and Transportation Division

Rachel Salazar

Pierre Washington

Molly Mahoney

Eunice Lemos-Adair

Carousel Gore, Equal Employment Opportunity & Training
Office Manager

Eric Knight, Siting, Transportation, and Environmental
Protection Division

Gypsy Achong, Building Standards Branch, Efficiency
Division

Michael Murza, Senior Attorney, Chief Counsel's Office

APPEARANCESSTAFF (cont'd.)

Michael Shewmaker, Building Standards Development Unit,
Efficiency Division, Building Standards Branch

Pamela Doughman, Reliability, Renewable Energy, and
Decarbonization Incentives Division

Kevin Mori, Industrial, Energy Research and Development
Division

Tanner Kural, Energy Research and Development Division

Josh Meserth, Fuels and Transportation Division

PUBLIC ADVISOR

Mona Badie

ALSO PRESENT

Neil Peyron, Tule River Tribe

PUBLIC COMMENT

Josh Stoops, Sacramento Municipal Utility District

Kelly Cunningham, Pacific Gas & Electric

Christopher Malotte, Southern California Edison

Bob Raymer, California Building Industry Association,
Building Owners and Managers Association, and the
California Business Properties Association

Sam Fishman, SPUR

Krysta Wanner, Western Propane Gas Association

Sean Armstrong, Redwood Energy

APPEARANCESPUBLIC COMMENT (cont'd.)

Jenny Sivie, Norman S. Wright Mechanical Equipment

Todd Titus, Heating, Air-Conditioning, and Refrigeration
Distributors International

Thomas Deary, Air-Conditioning, Heating, and Refrigeration
Institute

Renee Eddy, Rinnai America Corporation

David Moller, Marin-Sonoma Building Electrification Squad

Brad Heavner, California Solar & Storage Association

Lauren Weston, Acterra: Action for a Healthy Planet

Dana Fischer, Mitsubishi Electric

Bronte Payne, SunPower

Anne Pernick, SAFE Cities

Blake Herrschaft, Peninsula Clean Energy

Ted Tiffany, Building Decarbonization Coalition

Jeff Whitelaw, Daikin Comfort Technologies

Chris Bradt, LG Electronics

Brian Selby, California Association of Building Energy
Consultants

Melissa Yu, Sierra Club

Meg Waltner, Energy 350, on behalf of National Resources
Defense Council

Gina Griffiths Rodda

Heidi Werner, Energy Solutions

APPEARANCESPUBLIC COMMENT (cont'd.)

Michael Ferry, UC San Diego Center for Energy Research

Angela Richards, Monarch Tractor

Jared Klapperich, Zero6 Energy

INDEX		<u>PAGE</u>
Introduction		8
1. Public Comment		8
2. Agency Announcements		10
3. Consent Calendar		11
4. Information Item - Update on Interval Data Analysis		22
5. Information Item - 2023 CEC JAEDI Report		44
6. Emergency Rulemaking Amending the Opt-In Regulations to Add Reimbursement Procedures for Local Agencies		73
7. Adoption of the 2025 California Energy Code		80
8. Adoption of Voluntary Standards in the 2025 California Green Building Standards Code		156
9. Tule River Indian Tribe of the Tule River Reservation, California		14
10. Regents of the University of California; University of California, San Diego (UCSD)		168
11. Cost Share for Federal Funding Opportunities Industrial Decarbonization and Improvement of Grid Operations (INDIGO) Program and Food Production Investment Program (FPIP) - GFO-22-902		176

INDEX	<u>PAGE</u>
12. Power Electronics for Zero-emission Residential Resilience (PEZERR) - GFO-23-302	182
13. California's National Electric Vehicle Infrastructure Formula Program - GFO-23-601	192
14. Lead Commissioner or Presiding Member Reports	202
15. Executive Director's Report	212
16. Public Advisor's Report	213
17. Chief Counsel's Report	213
Adjournment	214

P R O C E E D I N G S

10:08 a.m.

WEDNESDAY, SEPTEMBER 11, 2024

(Whereupon an introduction video is played and not
transcribed.)

VICE CHAIR GUNDA: Good morning, everybody. My
name is Siva Gunda, Vice Chair of the California Energy
Commission. Today is September 11, 2024. I call this
meeting to order.

Joining me are Commissioners McAllister and
Gallardo. The Chair will be joining us later in the
meeting. Commissioner Monahan is absent. We have a
quorum.

Let us stand for the Pledge of Allegiance.

(The Pledge of Allegiance is recited.)

VICE CHAIR GUNDA: We'll first take public
comment, then move to agency announcements. Public Advisor
will help provide instructions.

MS. BADIE: Good morning, everyone. This is Mona
Badie, the Public Advisor for the California Energy
Commission. We'll have several public comment periods
today.

This first public comment period is the open
public comment period. It's for any informational items or
anything else on the agenda. We are kindly requesting that

1 if you are here to comment items seven or eight, that you
2 reserve those comments for the dedicated public comment
3 period for those items. This will ensure that we have
4 everyone that you want to hear your comments and everything
5 is directed towards the same topic. Those are the adoption
6 of the Voluntary 2025 Building Energy Efficiency Standards.
7 And then we'll follow up by item eight. And those will
8 start at 1:00 p.m. So if you're joining for seven and
9 eight, you can, you know, have flexibility with your
10 schedule and return at 1:00 p.m.

11 And if you are in the room with us, we do
12 encourage you to sign up using the QR code or visit the
13 public advisor table in the back of the room. Dorothy and
14 Ryan are there from the Public Advisor's Office and they
15 can assist you. It will help us and you will be, in the
16 order queued, you will be called. So we encourage you to
17 do that now because you can identify which item you're
18 commenting on. And if you're joining by Zoom, then we will
19 announce at that time and you will queue up at that time.

20 All right, with that, we'd like to ask for any
21 comments in the room for item one. This is the open public
22 comment period. I'm not seeing any raised hands in the
23 room or anyone on the QR code, so I will transition to
24 Zoom.

25 If you are on Zoom with us, please use the raise-

1 hand feature on your screen to let us know you'd like to
2 comment. That's an open palm on your screen or star nine
3 if joining by phone. Just giving that a moment.

4 All right, I'm not seeing any raised hands for
5 this public comment period. Back to you, Vice Chair.

6 VICE CHAIR GUNDA: Thank you, Mona.

7 Moving to item two, agency announcements. Today,
8 the Commission seeks to approve just over \$124 million in
9 investments contributing to our state's economy.

10 Item seven of our agenda today, adoption of the
11 2025 Energy Code, will be heard at 1:00 p.m. today. If
12 you're here just to hear that item, you can join us at 1:00
13 p.m.

14 I want to also announce that CEC's EPIC Symposium
15 is on Monday, October 28, and registration is now open. A
16 registration link will be added to the Zoom chat.

17 At this time, I would like to take -- I would
18 like to also take a moment to recognize that today's the
19 23rd anniversary of the events of September 11th, 2001, a
20 day of remembrance for many Californians. Let us take
21 moment of silence, please.

22 (Pause)

23 VICE CHAIR GUNDA: Thank you all. I just want to
24 share a personal story.

25 I came here as a student in 2001, and I was in

1 New York, upstate New York, working as an intern at General
2 Electric when September 11th happened. So I know for many
3 of us, it's just a very personal and profound moment. And
4 the freedoms that we have don't come free. You know, a lot
5 of people in this room and in our nation in the armed
6 forces work tirelessly to keep us safe in this country. So
7 I just want to share my gratitude to everybody here who
8 keeps us safe and moves this country forward.

9 As I say that, I see Jason in the back, who's a
10 veteran, entering the room. Thank you, Jason.

11 With that, let's see if you guys have any
12 comments. Commissioner McAllister?

13 COMMISSIONER MCALLISTER: Thank you. Now let's
14 turn to item three, consent.

15 MS. BADIE: Thank you. The Commission now
16 welcomes public comment on item three. That's the consent
17 calendar. If you're joining us in the room, you can use
18 the QR code in the back of the room to let us know you'd
19 like to comment. Also, I'll take a show of hands in the
20 room. And if you're joining on Zoom, please use the open
21 palm symbol on your screen to raise your hand or star nine
22 if joining by phone. And I'm not seeing any hands in the
23 room, so I'm going to transition over to Zoom.

24 All right, Josh Stoops, I'm going to open your
25 line. If you could please announce your affiliation, if

1 you'd like to share that. And we are asking for comments
2 to be two minutes or less. There will be a timer on your
3 screen. Josh, your line is open. You'll have to unmute on
4 your end and begin.

5 MR. STOOPS: Good morning. Josh Stoops, J-O-S-H
6 S-T-O-O-P-S, on behalf of the Sacramento Municipal Utility
7 District. I apologize, I wasn't able to be there in-person
8 this morning.

9 SMUD would like to express its appreciation to
10 the CEC for the selection of SMUD's project for funding
11 through the Reliable, Equitable and Accessible Charging for
12 Multifamily Housing, or REACH 2.0, solicitation. We
13 recognize there's a substantial gap an accessible and
14 reliable charging for low-income and disadvantaged
15 communities, particularly -- excuse me -- particularly for
16 residents of multifamily housing. This charging gap
17 undermines EV adoption and erodes EV user experience.

18 SMUD's REACH 2.0 Project aims to demonstrate a
19 business model to address this charging gap. SMUD's
20 project will deploy 300 Level 2 charging ports and 200
21 Level 1 charging ports within a quarter mile of multifamily
22 housing units within SMUD's service territory. Employment
23 of these projects will prioritize low-income and
24 disadvantaged communities and offer a variety of lower cost
25 and discounted rates to make charging more affordable.

1 The project also includes a direct community
2 outreach and engagement component to raise awareness about
3 EVs and the features of the new chargers.

4 Again, SMUD appreciates the CEC's recognition of
5 the value of this project and through the REACH 2.0 award.
6 Thank you.

7 MS. BADIE: Thank you for your comment. And that
8 concludes public comment for item two.

9 Back to you -- excuse me -- back to you, Vice
10 Chair, for item three.

11 VICE CHAIR GUNDA: Thank you, Mona.

12 Unless there's any Commission discussion on the
13 item?

14 COMMISSIONER MCALLISTER: Yeah, I just wanted to
15 mention one thing. I know this is consent, but I wanted to
16 note that one of the ECAA projects that is really
17 interesting and kind of worth noting is the Forestville
18 project, which is a floatovoltaics. It's the first
19 floatovoltaics project that we've done through ECAA,
20 certainly, and one of the few in the state. And it's, kind
21 of, I think it's going to be a growing trend, but it has a
22 lot of benefits in that it decreases, you know, water
23 temperatures and abrasion from the reservoir.

24 And it's sort of a multi-benefit approach to
25 doing solar. And it takes advantage obviously of space

1 that is otherwise occupied. So it's sort of a dual use of
2 the reservoir. So anyway, nice innovation and glad to
3 support this.

4 With that I'll move the item.

5 VICE CHAIR GUNDA: Thank you Commissioner.

6 You'll second the item?

7 VICE CHAIR GUNDA: I will second the item.

8 VICE CHAIR GUNDA: Can we now take the vote.

9 Commissioner McAllister?

10 COMMISSIONER MCALLISTER: Aye.

11 VICE CHAIR GUNDA: Commissioner Gallardo?

12 COMMISSIONER GALLARDO: Aye.

13 VICE CHAIR GUNDA: Thank you. My vote is aye as
14 well. The vote count is three-zero, and the motion passes.
15 Thank you.

16 With that, let's -- we're going to take this a
17 little out of order. We're going to move to item nine
18 next, Tule River Indian Tribe of the Tulalip River
19 Reservation, California. I welcome Sean Lockwood to
20 present. Thank you.

21 MR. LOCKWOOD: Good morning, Vice Chair and
22 Commissioners. My name is Sean Lockwood, and I'm a
23 Contract Agreement Manager for the Energy Conservation
24 Assistance Act, or ECAA program, in the Reliability,
25 Renewable Energy, and Decarbonization Incentives, or RREDI,

1 division. Today, we are joined by Shine Nieto, Neil
2 Peyron, and Corina Harris from the Tule River Indian Tribe,
3 and Lawrence Manuel, as well.

4 Next slide, please.

5 I'm here today to present ECAA's second tribal
6 loan application for discussion and approval. Award of
7 this loan aligns with the state's broader goal to improve
8 grid reliability through battery energy storage. This
9 project is a great example of the success of the 2022 ECAA
10 expansion, since it's a tribal loan recipient installing
11 battery energy storage, both of which wouldn't have
12 qualified a few years ago.

13 Also, this 400 kilowatt battery energy storage
14 project will be the largest of its kind in ECAA program
15 history. Battery energy storage systems and PV arrays will
16 allow these sites to be available to the community as
17 cooling stations during power outages and fallback
18 gathering locations during wildfires, which plagued the
19 surrounding communities.

20 Additionally, the project fosters collaboration
21 with tribes.

22 Next slide, please.

23 This specific loan agreement is for \$2.2 million
24 to support the construction of four solar PV arrays,
25 totaling 492 kilowatts, each paired with a battery energy

1 storage system.

2 The photo on the left shows the proposed solar PV
3 array at the tribes Eagle Feather Trading Post No. 2, which
4 is a convenience store, filling station and electric
5 vehicle charging station serving the tribe and surrounding
6 community. The energy produced will offset first-year
7 consumption by over \$150,000 and support existing electric
8 vehicle charging infrastructure with a simple payback of 14
9 and a half years.

10 The project is being funded in tandem than with a
11 grant from the Department of Energy. Also, the tribal will
12 be utilizing a CEC grant for additional EV chargers for
13 medium and heavy duty vehicles.

14 Finally, this project represents a bridge to
15 future EECA projects, demonstrating that combined solar PV
16 and battery energy storage loans can be cost-effective
17 through peak shaving, demand reduction, and energy
18 arbitrage.

19 Next slide, please.

20 EECA staff recommends adoption of staff's
21 recommendation that this project is exempt from CEQA and
22 approval of the Tule River Loan Agreement.

23 This completes my presentation, and I would like
24 to close with welcoming Treasurer of the Tule River Indian
25 Tribe, Neil Peyron, to speak about the project. Thank you.

1 MR. PEYRON: Good morning, Commission. Thank you
2 for giving me this opportunity to make some comments
3 regarding this project.

4 As you're aware, the solar battery project will
5 install roughly 521 kilowatt hours of solar photovoltaic
6 systems for four tribal commercial facilities to offset 98
7 percent of the annual power consumed by these buildings.
8 The facilities will have battery backup that will last
9 between 2.5 and 3.7 hours in its current configuration.
10 This project will not only save the tribe nearly \$6.6
11 million over the life of the system, but will also add
12 resiliency for the community by being a location where they
13 can congregate if needed during an emergency.

14 We look for your positive vote in this matter.
15 Most reservations are isolated, such as ours. Our
16 reservation is the second largest reservation in the state
17 of California and has a population of over 1,500 people
18 residing there that rely on unreliable power. We are at
19 the end of two grids. A lot of times we have brownouts,
20 blackouts. We got a notice from AT&T yesterday there may
21 be a public safety shutoff. And a lot of our people rely
22 on power to provide water, cooling, and other life-
23 sustaining treatments, breathing machines and other things
24 for people that require those types of services.

25 I want to thank the Commission for being forward-

1 thinking and including tribes in these types of things, as
2 well as the state, because as you just heard, normally
3 we're left out and we're forgotten about. We're the last
4 ones to be notified of evacuation centers. We're the last
5 ones to receive aid. I believe a few years back, East
6 Porterville ran out of water and it made international
7 news. My people ran out of water every year. We don't
8 make the local paper.

9 So I do want to thank you for this opportunity
10 and in receiving these funds, again, with your positive
11 vote, so that we can move forward to be a little more self-
12 sustaining, to ensure that we can provide services to our
13 community and to ourselves and the people that we support.

14 So on behalf of the Tule River Tribe, I want to
15 thank you. I want to thank the Vice Chairman and our
16 Councilmember elder that accompanied me here, and our
17 chairman of our economic development corporation, Corina
18 Harris, for being here in support. So thank you very much.

19 VICE CHAIR GUNDA: Thank you so much.

20 We'll move to public comment.

21 MS. BADIE: Thank you. Thank you. The
22 Commission welcomes public comment on item nine at this
23 time. If you're in the room with us, you can use the QR
24 code. And if you're joining by Zoom, please use the raise-
25 hand feature on your screen, or star nine if joining by

1 phone. So I'm just going to check our queue here.

2 And we do not have any raised hands for this
3 item, so back to you, Vice Chair.

4 VICE CHAIR GUNDA: Thank you, Mona.

5 Moving to Commissioner discussion. Commissioner
6 McAllister?

7 COMMISSIONER MCALLISTER: Well, great. Treasurer
8 Peyron and leadership of the tribe, really appreciate your
9 being here. Enjoyed meeting a little bit earlier this
10 morning and just understanding a bit more in depth all the
11 challenges that you face and an incredible resilience in
12 all the infrastructure you're building of your own volition
13 and your own accord and with your own investment to really
14 find solutions to many of those challenges.

15 We're definitely excited, I'm excited, I think we
16 all are about this item and certainly want to support the
17 EECA. We're ecstatic that the legislature opened up the
18 EECA program so that we can include tribes. And so this is
19 the second and the largest and really appreciate the
20 presentation. Thanks very much for that, Sean.

21 I think it's really hard to overstate the
22 importance of not just reliable electricity, but reliable
23 electricity that has quality, that is quality electricity,
24 right, voltage, you know, that needs to be there all the
25 time, but it also needs to be at a high quality. And so,

1 definitely, I've worked in a lot of places in the world
2 that do not have not just not reliable power, but power
3 that's really horrible quality, and it causes a lot of
4 damage. And so, hopefully, these projects and future
5 collaboration can help improve that situation as well.

6 And with power comes water, health services, you
7 know, broadband services. So just, really, those are the
8 basic infrastructure of modern life. And we're just really
9 happy and sort of grateful to be in a situation to be able
10 to help out in our small way, but also to help build
11 collaboration for the future.

12 So I'm very happy to support this item. Thanks.

13 VICE CHAIR GUNDA: Thank you. Commissioner
14 McAllister.

15 Commissioner Gallardo?

16 COMMISSIONER GALLARDO: Buenos dias. Good
17 morning. I, too, want to emphasize, you know, we recognize
18 how many sacrifices you've had to make, and at the same
19 time just honor the leadership that you are showing in
20 terms of trying to get more stability and also secure
21 sovereignty for your people. And we're glad that you have
22 stepped up here to take a hold of this opportunity with the
23 Energy Commission. And we're hoping that that continues to
24 develop our partnership together so that we can continue
25 seeing how much more we can do together to help ensure that

1 you're not having to sacrifice as much as you have before.

2 So again, thank you for your time, for being here
3 in-person, for sharing with us your story, and I am excited
4 to support this.

5 VICE CHAIR GUNDA: Thank you, Commissioner
6 Gallardo.

7 I just want to thank the presentation and thank
8 you for your comments.

9 I just want to recognize the Chair's, Chair
10 Hochschild, who is not here, but his commitment to ensure
11 that the work at CEC really honors the work that the tribal
12 nations are doing and that ability to fully support and
13 leverage the funds we have. So we see this as an
14 opportunity for the state to continue to make sure the
15 investments are equitably done and in a way that it's
16 benefiting everybody who lives in California and that
17 includes our tribal nations. So thank you so much for
18 being here. And thank you for your comments. I look
19 forward to supporting the item as well.

20 With that, let's move to bring -- Commissioner
21 McAllister, would you like to move?

22 COMMISSIONER MCALLISTER: I think I look forward
23 to visiting at some point, so thanks for the invitation.
24 And I move this item.

25 VICE CHAIR GUNDA: Commissioner Gallardo, second?

1 COMMISSIONER GALLARDO: I second.

2 VICE CHAIR GUNDA: Let's take a vote.

3 Commissioner McAllister?

4 COMMISSIONER MCALLISTER: Aye.

5 VICE CHAIR GUNDA: Commissioner Gallardo?

6 COMMISSIONER GALLARDO: Aye.

7 VICE CHAIR GUNDA: My vote is aye as well. With
8 that, the item passes three-zero. Thank you so much.

9 So with that, we'll move to -- we'll come back
10 into the order. Let's move to item four. It's an
11 informational item update on interval meter data analysis.

12 MS. PETERSEN: Good morning, Commissioners and
13 Vice Chair. My name is Claire Petersen. I'm a PhD student
14 at Stanford, but I had the excellent opportunity to spend
15 the summer here working in Commissioner McAllister's
16 office. And my research related to the interval meter data
17 that's housed here at the CEC. So that's what I'm here to
18 speak to you about today.

19 Go to the next slide, please.

20 So just right off the bat, for anyone who's not
21 familiar, I wanted to introduce what this meter data is.

22 So for about 90 percent of the buildings in
23 California, we have here housed at the CEC, data related to
24 time series energy consumption for those buildings from
25 2018 to 2023. And this is both residential buildings and

1 commercial buildings. And I like to split the data up into
2 two different categories. There's the billing data and the
3 interval meter data. And the billing data includes
4 approximately monthly records that are from a billing cycle
5 of both natural gas and electricity consumption, while the
6 interval meter data is hourly records, so a very fine
7 granularity only for electricity, though.

8 And in addition to this time series energy
9 consumption, we know for the building certain information.
10 We'll know their address. We'll also know information
11 about their rate codes and some of their program
12 participations. And I'm going to refer to this term a few
13 times in the future, so I'll just mention it now, we'll
14 also know an identification code for that building that I'm
15 going to refer to as a premise ID.

16 So like I said, the data is here at the CEC. We
17 got it from the utilities, and it's in the CEC's Data
18 Engineering Unit, but members of the CEC staff can pull it
19 into a database and then manipulate it in a notebook.

20 So please go to the next slide.

21 So why do we care about this data that I'm
22 telling you about? The reason why is because it has a lot
23 of different applications.

24 If you study historical data, so from 2018 to
25 2023, you can get an understanding of future consumption

1 profiles which you can use to improve the CEC's
2 forecasting. You can also look at specific types of energy
3 consumers and their energy consumption profiles to then
4 target them for policies, or you can also track the
5 progress of the existing policies that the CEC has in
6 place.

7 So today I've already given you a little bit of
8 an overview of the billing and interval meter data. Next,
9 I'm going to jump into some advice specifically for CEC
10 staff on how to query this data, and by that I mean just
11 take a subsample and then manipulate it. And then I'm
12 going to give you examples of just that which I've done
13 this summer. I had one project related to heat pumps and
14 another one related to data centers.

15 Please go to the next slide.

16 So this slide is a little bit overwhelming, but
17 what it's showing is a kind of a flow chart of how I think
18 about querying the data. And I'm going to express this to
19 you in an example.

20 So for my heat pump project, I began with a list
21 of addresses where I knew that a heat pump had been
22 permitted and installed in the past six years. So that can
23 be represented by that blue column on the left that says
24 address one. That's my starting point. And it's not so
25 irregular for someone to say, hey, I have some addresses

1 I'm interested in understanding the energy consumption of.
2 So that's a pretty typical starting point.

3 Unfortunately, it's difficult to reach into the
4 CEC database by addresses. Because there's so much data,
5 you can't say, hey, I want the consumption for this
6 address. But what you can do is try to find that premise
7 ID, the identification code for that building, and then
8 request data for a series of those premise IDs.

9 So the way that I like to do this in order to
10 find those premise IDs is by starting with picking a
11 region. So for me, for my heat pump project, all of my
12 addresses were in Sacramento. And then I requested every
13 single address and every associated Building Code in
14 Sacramento. So I have kind of my subsample I'm trying to
15 target and I get a bigger sample of addresses.

16 And then I try to find the Building Codes
17 associated with those addresses either by merging on the
18 address names, which is kind of tricky because they tend to
19 be in a regular format, but you can also geocode those
20 addresses to latitude and longitude and then merge on
21 latitude and longitude, which I think was more successful.

22 So the whole point of this was to get a list of
23 building identification codes so that you can make your
24 second request from the CEC Data Engineering Unit, which is
25 time series energy data by Building Code.

1 So that's kind of what I wanted to show you on
2 this slide is this is a flowchart for querying the CEC's
3 energy data. If you have questions about this or want to
4 follow up with me, I'm more than happy to explain this in
5 more detail as well.

6 Can you please go to the next slide?

7 So a word of caution before I move on. There is
8 a lot of data that the CEC has in this online warehouse.
9 And if you try to pull too much data, you're going to
10 probably crash your computer, which I am probably guilty of
11 having done on accident. But I've learned, so now I'm here
12 to tell you about it.

13 If you are pulling data, you should probably try
14 to keep it below a million rows to start. That means if
15 you're just in that phase one of looking for addresses and
16 premise IDs, you can maybe pull all the addresses for one
17 county or for about 30 zip codes, if that was how you were
18 doing your regional analysis. But when we start getting
19 into time series consumption data, if you wanted six years
20 of monthly data, you could probably only ask for about
21 10,000 buildings. But if you wanted six years of hourly
22 data, you could probably only ask for about 20 buildings at
23 a time.

24 So this restricts some analysis, but you can also
25 be a little bit clever about only picking specific years or

1 something like that, or when you get more experience, you
2 could ask for more, but not much more.

3 Next slide, please.

4 So that's the end of my kind of tips and tricks
5 on querying. I'm now going to tell you about the projects
6 that I did this summer. So my first one is on quantifying
7 the impact of installing an HVAC heat pump on energy
8 consumption.

9 So for anyone who's listening in who doesn't know
10 what a heat pump is, most buildings in California are using
11 natural gas to heat their homes. But we ideally are in a
12 process of transitioning from this natural gas heating to
13 electrification. And a heat pump is a type of technology
14 that allows you to use electricity to heat your home
15 instead. And you can also use that heat pump to cool your
16 home in the summer, and it has a higher efficiency than a
17 normal air-conditioning unit, which means you have to use
18 less electricity.

19 So here is for, again, the Sacramento region. I
20 was able to pull many hundreds of observations of HVAC heat
21 pumps being installed, and then I could use regression
22 analysis to understand the impact on a monthly basis,
23 that's my x-axis, of installing a heat pump on natural gas
24 consumption, which is shown on the left, and then
25 electricity consumption, which is shown on the right. And

1 the lines that you see on the graph are the consumption
2 profiles on a monthly basis before the heat pump was
3 installed compared to afterwards.

4 So you can see that in the winter, there was
5 significantly more natural gas consumption that was used
6 for heating your home before the heat pump was installed
7 compared to afterwards. But then, consequentially, you
8 also used more electricity in the winter for heating your
9 home, but you did use less electricity in the summer for
10 cooling your home. So none of these results are
11 surprising. This is kind of what we expect from a heat
12 pump.

13 But one of the interesting things about doing
14 this analysis is a few things. One, you can understand for
15 different types of consumers and potentially in different
16 locations how installing a heat pump is going to impact
17 their energy consumption and therefore their bills, but you
18 can also use these metrics to use machine learning to pull
19 out the heat pumps and identify them using the CEC's energy
20 consumption and therefore track the amount of heat pumps
21 that are being installed.

22 Next slide, please.

23 So that was a demonstration of the monthly kind
24 of billing data that the CEC has.

25 Now here's an example of the interval meter data,

1 so the hourly data. We're still in the land of heat pumps
2 and we're still showing a before and after comparison of
3 installing a heat pump, but now my x-axis is hours in the
4 day and I'm showing you graphs only for electricity because
5 we only have electricity consumption on an hourly basis for
6 January and July.

7 So you can see in January, there's a spike in
8 electricity consumption after a heat pump is installed,
9 which is expected, because now you're using that heat pump
10 to heat your home. And that spike occurs between about
11 5:00 and 11:00 a.m. But in July, there's a reduction in
12 electricity consumption, because your heat pump is more
13 efficient than your regular AC. And that reduction in
14 consumption occurs in the late afternoon and early evening.

15 And I'd like to underscore this result. I think
16 it's pretty interesting because there are some concerns
17 that installing a bunch of heat pumps is going to stress
18 our electricity grid, but it does depend on what hour of
19 the day that electricity is consumed, and we're seeing that
20 during peak hours, which tend to be about 4:00 to 9:00
21 p.m., in the winter we don't see a change in consumption,
22 whereas in the summer we actually see a reduction in
23 electricity consumption.

24 Next slide, please.

25 So now I'm moving on to my second project this

1 summer, which was working with data center electricity
2 consumption. And for anyone who's not familiar, again,
3 data centers are buildings that consume a lot of
4 electricity because they're being used for data processing
5 and servers, sometimes related to AI or machine learning.
6 And it's important for the CEC to track the consumption of
7 these data centers because they can consume a lot. They
8 can be very big kind of sects of consumption for buildings.

9 So I am showing you a graph on the left of hourly
10 electricity consumption from 2018 to 2024 for 79 data
11 centers that I was able to find in the CEC's data, but also
12 78. And the difference between that 79 and the 78 is it's
13 just one data center, so it's cumulative consumption for
14 those 78 and 79.

15 And the reason why I pulled this distinguisher is
16 because that 79th data center that makes up the blue line
17 is the biggest data center that we found and it was
18 consuming about a gigawatt of electricity during the summer
19 of 2019 which for reference is like two to five percent of
20 California's electricity consumption, so this is just kind
21 of highlighting why we care about them. Without that data
22 center, it's only about 200 megawatts that are being
23 consumed to this day.

24 But the cool thing is, if we can identify these
25 data centers in the CEC's meter data, we can then get a

1 sense of their profiles and understand for forecasting how
2 much they're going to be consuming. So I was able to kind
3 of do a sensitivity analysis and see what external events
4 might be impacting their consumption. So I was able to run
5 a regression analysis and see pretty quickly they don't
6 respond to flex alerts, at least the ones that I was
7 working with. They didn't seem to be on a location of
8 marginal pricing scheme, because they didn't respond to it
9 so much.

10 Temperature, they do increase their consumption,
11 because likely they need more electricity for cooling. And
12 they increase their consumption during the day, and they
13 increase their consumption during the summer. So it's not
14 necessarily a flat line. They're not increasing by a lot,
15 it's maybe 2 to 15 percent, but it's not constant all the
16 time, it does vary.

17 Next slide, please.

18 So all I want to do here is underscore some of
19 the benefits of using this data for analysis. You can see
20 for heat pumps, by understanding the impact on electricity
21 and natural gas and installing heat pumps, we can improve
22 forecasting in the future as we kind of quantify the number
23 of heat pumps being installed and how we think they're
24 going to impact energy consumption. And a similar thing in
25 data centers. By understanding their profiles better, we

1 can know for the future how data centers are going to
2 impact California electricity consumption. And we can also
3 get a better sense of how electrification policies might
4 impact households and also track those electrification
5 policies. And we can also target demand response
6 potentially for data centers, things like that. These are
7 all just examples of cool things to do with the meter data.

8 So next slide, please.

9 That's the end of my presentation. I'm really
10 grateful for your time, and especially for Commissioner
11 McAllister for letting me work with him this summer. It's
12 been really an excellent experience. And my team, which is
13 listed there, were just incredibly, incredibly useful and
14 kind people. So thank you very much.

15 VICE CHAIR GUNDA: Thank you so much, Claire.

16 Let's go to the discussion, Commissioner
17 McAllister.

18 COMMISSIONER MCALLISTER: Thanks so much, Claire,
19 for a really solid presentation, and it's just been a
20 pleasure to work with you. We're obviously hoping you can,
21 you know, stick around and keep pushing the ball forward.

22 I want to, first of all, just highlight what a
23 marvelous program we have going with Stanford and the
24 Energy Fellows that we're able to, you know, house at the
25 Commission for whatever length of time, and just the

1 quality of the thinking and just the quality of the
2 professionals and students that come. And you're, I think,
3 a shining example of that. And I wish I had some of -- I
4 wish I had been smart enough to do some of this thinking
5 when I was doing my PhD because being able to, you know,
6 sort of match up houses more effectively with the actual,
7 you know, consumption and billing information would have
8 been super helpful.

9 And I also wanted to thank Hughson and Maggie
10 from my office, Jason and the whole team that you showed,
11 just I think to a person, I've heard that the value of
12 interacting with has been just really helpful for the
13 Commission. And I really appreciate your sort of helping
14 us as an agency unpack, you know, create some tools and
15 unpack sort of the different aspects of the IMD, of the
16 data that we now have and helping us be more effective and
17 more efficient in taking advantage of that data.

18 I did want to point out that, you know, this data
19 is incredibly well protected. So this data is not
20 available to just anybody. You know, we are on the same
21 side of the firewall that the utilities themselves are on.
22 And so we apply all the same, you know, equivalent
23 mechanisms to protect the data. You know, you just -- we
24 didn't just sort of open the door and just let you walk
25 into all this data. You know, a lot of -- there's

1 training, there's access, there's a lot of control over who
2 is able to actually see the data. We certainly are not
3 going to be giving it out to entities that do not -- that
4 would endanger the PII nature of the data, you know, the
5 personal information.

6 So I wanted to be very clear about that. This is
7 an extremely serious effort to house and use this data for
8 policy purposes and for sort of understanding energy
9 consumption and where it is unpacking and sort of
10 disaggregating, slicing and dicing in all sorts of
11 different ways, which you started to suggest, and then
12 using it for forecasting.

13 And I think it's extremely powerful to be able to
14 understand how we can best use our public monies if when
15 we're going to roll out programs to subsidize heat pump
16 conversions and other energy efficiency measures in
17 disadvantaged communities under resourced households. And
18 so we certainly want to keep an eye on the potential
19 impacts on energy bills. And we certainly want to keep an
20 eye on making sure, we want to make sure in those programs,
21 you know, inherent to the design of those programs, that
22 the subsidy money goes to homes that have the highest
23 positive impact in terms of energy savings and emissions
24 reductions too.

25 So building on your presentation, I really wanted

1 to, you know, you showed it's like '23, you showed that,
2 you know, the three posed impacts of a heat pump change
3 out, and you pointed out that the time, you know, winter,
4 the peak in the evening doesn't go up and the peak in the
5 morning is really where the impact is, and so, you know,
6 unlikely. Obviously we need to look at that, and it's
7 going to vary across the state, but it's unlikely to really
8 exacerbate the capacity problems at the distribution level
9 for that reason. It will depend on the climate zone.

10 But also those, you know, peak savings in the
11 evening through, essentially, efficiency and air-
12 conditioning is really important to understand as well.
13 And so I think that's really important.

14 And that maps very well over to emissions. You
15 know, you sort of looked at the electricity part, but the
16 gas, the reduction in gas consumption goes directly to the
17 onsite emissions at that property, at that home. And so
18 that just shows very clearly that it's a key part of our
19 decarbonization strategy. And as the electricity system
20 gets cleaner and cleaner, that just maps directly over to
21 emissions reduction. And so this is really a core part of
22 our climate response.

23 So let's see, I guess on the data centers, you
24 know, I still, I think, you know, we all have a lot of
25 questions about that because it's a complex, you know,

1 environment, but I think the nature of this sort of work is
2 that you start where you have to start at the beginning and
3 then -- but it only gets better. You know, you create
4 algorithms, you go back, it creates questions, you redo it,
5 you know, sort of resample, you figure out where your
6 issues are. And so that's the power of these digital tools
7 that we're creating. And so once we've got algorithms that
8 are dialed in, we can just, you know, as we keep getting
9 them more, you know, the new data every quarter from the
10 utilities and clean it up and put it in this resource, the
11 intelligence that we'll be able to apply just only gets
12 better.

13 So, you know, we've really started a nice, you
14 know, snowball at the top of the mountain and we're just
15 going to watch it roll and get bigger and really, you know,
16 I think be -- you know, expand the use of this data in
17 responsible ways with our staff, and really appreciate your
18 helping that process along been a really pleasure to work
19 with you this summer and, you know, looking forward to
20 collaborating in the future as well.

21 So really appreciate the presentation. Thanks
22 Claire.

23 MS. PETERSEN: Thank you.

24 VICE CHAIR GUNDA: Thank you, Commissioner
25 McAllister.

1 Commissioner Gallardo?

2 COMMISSIONER GALLARDO: Claire, congratulations.
3 That was an excellent presentation, really cool work that,
4 you know, you got to do. And I need to wrap my head around
5 it to figure out how I can use it, but I just wanted to
6 make sure that you know that presenting is difficult,
7 especially, you know, in a public audience like this and
8 you did tremendous. So hopefully you continue doing these
9 types of things, the research, the analysis, which is
10 incredible, and then also presenting and hopefully staying
11 with us too.

12 MS. PETERSEN: Thank you.

13 VICE CHAIR GUNDA: Thank you, Commissioner
14 Gallardo.

15 Claire, thank you so much for the presentation.
16 Also super excited about the work.

17 I want to just begin by just saying, you know,
18 it's always a good thing to remind the setup for the data
19 here at the agency has been a labor of love for
20 Commissioner McAllister. You know, it's been like a decade
21 in the making of trying to get this data here and try to
22 make sure we not only use the talent within the Energy
23 Commission, but like have people like you with incredible
24 skillset that are thinking about, you know, novel ways to
25 think through this information, you know, come here, help

1 and support and inspire the innovation of data.

2 And I know it doesn't happen in a silo, so I do
3 want to recognize all the people you recognized Bryan
4 Early, Winston (phonetic), Maggie, Jeremy, Smith, Shubham,
5 Jason, and Ian. So thank you, all of you, for taking the
6 time to kind of provide Claire the support to do what she
7 was able to do in this.

8 I think I just wanted to share a couple of pieces
9 on this. You know, about a decade ago now, but more so in
10 the last five to six years, given the digitization of the
11 grid, you know, we have really kind of in this moment of
12 moving away from forecasting demand and bringing supply to
13 meet the demand to a place where we need to co-optimize,
14 you know, in a very agile fashion, you know, the demand and
15 supply because they're both moving constantly, so I think
16 the ability of the AMI data is really that; right? I mean,
17 what you've shown today is the opportunity for us to both
18 geographically and temporally really disaggregate the
19 opportunity for understanding when the demand comes, but
20 also when it could be flexed and all the good benefits it
21 could have on a good planning.

22 I think for those in the room and listening in, I
23 think a couple of data points. The PUC, obviously, which
24 oversees about 75 percent of the footprint in California,
25 you know, when they did the distribution upgrade analysis,

1 is they're looking about \$50 billion of distribution
2 upgrades, right, you know, that are coming in. And
3 similarly, if you look at the CAISO's transmission planning
4 process, that's like another \$50 billion. So you're
5 looking about \$100 billion on the supply and the demand
6 side upgrades required to bring the demand that we're
7 asking to be brought online. And I think the power of this
8 tool, of this kind of analysis, is really optimizing the
9 upgrades and maximizing our ability to reduce costs and
10 hence, you know, rate-paired benefits.

11 So I was just so happy, giggly, as you were
12 presenting. And kind of like just even that one data point
13 you showed about one of the data centers moving away, you
14 know, I think I know which one it is. It's SMUD?
15 Sacramento?

16 MS. PETERSEN: Yes.

17 VICE CHAIR GUNDA: So the, you know, the amount
18 of distribution opportunity it creates; right? And then
19 you want to understand. And it was really interesting to
20 think about the kind of flex alerts and the impact and the
21 grid reliability. All of them is like just a wealth of
22 information. So thank you, Claire, so much for doing this
23 work. And I will join the chorus and say, I hope you, you
24 know, find this an amazing place to continue to stay with
25 us.

1 COMMISSIONER MCALLISTER: Yeah.

2 VICE CHAIR GUNDA: Commissioner McAllister?

3 COMMISSIONER MCALLISTER: I really appreciate the
4 point about the load flex. And, you know, we have this
5 7,000 megawatt goal for load shift by 2030. And, you know,
6 roughly half of it is more on the supply side, sort of
7 traditional DR. The other half, roughly, is the load
8 modifying.

9 And these tools are going to help us. You know,
10 there's some methodological problems about how, you know,
11 what is the baseline on that load modifying piece, and then
12 how we actually detect changes in load shapes so that we
13 can know, you know, what is the impact of all this load
14 flex, like day in, day out, you know, routinized load flex.
15 That really goes to the distribution investment, you know,
16 so sort of being able to improve load factor and fill
17 valleys and clip peaks sort of on a routine basis so that
18 we are optimizing the use of the distribution grid and we
19 can delay some investments in it.

20 So, you know, I think both on the sort of the
21 CAISO level with active management of our load resources,
22 and also on the sort of longer term, you know, load shape
23 impacts, this data is going to be really key. And as I,
24 you know, I am certainly -- I get pretty out over my skis
25 because my tool my toolbox is about 20 years old on big

1 data in terms of how to actually use it, so it's really
2 been great to learn from you. I realize I need to go learn
3 Python if I want to do anything. But I think our staff,
4 you know, is totally primed to really jump in. And we have
5 a lot of skilled analysts, obviously, just world-class, and
6 so really excited about this.

7 But building the sort of algorithms and then
8 trying to bridge those over into the AI world and
9 automating, you know, machine, we used to call it machine
10 learning, now we, you know, call it AI or whatever, but I
11 think those tools are going to get so powerful so fast.
12 It's going to really help us inform policy. So I'm super
13 happy, very, very happy, optimistic about where we're going
14 with this.

15 So yeah, it has been a long lift. I mean, we
16 know we've been working together on this a long time, and
17 Jason has been, and Drew, your support has been amazing.

18 But it really -- the last thing I wanted to say,
19 I know this is an informational item, I don't want to use
20 up too much time, but this, you know, as I said, we're
21 doing, you know, all the work we have to do to protect PII
22 and protect this data, and at the same time, we want to
23 find ways to make it available to be able to inform and
24 create knowledge.

25 And, for example, cities and counties, you know,

1 local governments have -- they have, by law, they have to
2 do climate planning, SB 375, they find it really difficult
3 because they need better information about what the energy
4 use patterns in their jurisdictions actually are. And they
5 have their own local programs and they want to understand
6 the impacts of their different local policies on their
7 population, their residents and properties and, you know,
8 informed land use and all the things they have to do.

9 And so having a contractual mechanism to be able
10 to do analysis with this data that can inform city policies
11 is something we're focused on, and that contractual
12 mechanism is really important, and so -- but we're getting
13 there. And I just want to, I think over the next six
14 months and then the lead up to the electrification summit
15 in March, hopefully going to make a lot of progress and be
16 able to really sort of be open for business in that way as
17 well. So that's part of the plan for this data resource.

18 Anyway, I wanted to just let you all know.

19 VICE CHAIR GUNDA: Yeah. Thank you, Commissioner
20 McAllister. I want to just close with this, but I just
21 want to ask Claire one quick question.

22 So you talked about using the latitude and
23 longitude data as a way to anchor the data sets. What's
24 the success? Do you feel like that's a good way to do?

25 MS. PETERSEN: Yeah. I can't give you an exact

1 number, but my general ballpark was that if you tried to
2 merge addresses by the address itself or a string, you
3 might -- you can do some fun tricks to make it better, but
4 at the end of the day it might only be 70 percent
5 successful, whereas with geocoding it was more like 95
6 percent, I had somewhere. I felt like I got everything.

7 So you have an internal way to geocode at the
8 CEC. I've been floating around sample code to staff for
9 how to do it, so it's pretty straightforward.

10 COMMISSIONER MCALLISTER: It will be great to,
11 you know, definitely interact with staff. And, you know,
12 we kind of need to figure out how we create sort of a
13 clearinghouse for a lot of the work that's being done
14 across the Commission, including yours, and so that we can.
15 You know, certainly, I think you gave a talk to staff
16 internally already, right, or is that planned or no?
17 Anyway, I talked to somebody about it.

18 But, you know, have that peer-to-peer learning, I
19 think is really what's going to help accelerate this as
20 well. So, you know, you're on the team and I hope we can
21 facilitate that. So thanks again, Claire. Great job.

22 VICE CHAIR GUNDA: Yeah. Thanks again, Claire.
23 And recognize that 90 percent of the work in this big data
24 is cleaning the data and organizing.

25 So with that, it's an informational item, so we

1 don't have a vote on it. And thank you again, Claire.

2 So we'll go to item number five, informational
3 item, again, on 2023 CEC JAEDI Report. I welcome Mona
4 Bhatti and Carousel Gore to present. Thank you.

5 MS. BADIE: Good morning. Good morning, Vice
6 Chair, Commissioners, and other attendees. My name is Mona
7 Badie. I'm joined by my colleague, Carousel Gore.
8 Together, we are here to present the 2023 Justice, Access,
9 Equity, Diversity, and Inclusion, or JAEDI Report.

10 Next slide, please.

11 The JAEDI Report is an opportunity for us to
12 highlight some of our work from 2023 towards advancing
13 justice, access, equity, diversity, and inclusion. With
14 the help of others, I will be presenting on our outward-
15 facing initiatives, also called JAEDI-Out. Afterwards, you
16 will hear from Carousel Gore, who will be presenting on our
17 inward-facing initiatives, also called JAEDI-In.

18 Next slide, please.

19 As part of CEC's JAEDI-Out work, Commissioner
20 Gallardo spearheaded the Communities of Practice
21 Initiative, called COPs for short. Five focus areas were
22 selected with staff leads and Commissioner champions for
23 each. CEC staff had the opportunity to join one or more of
24 the COPs via all staff survey, and each group met and
25 developed one or more recommendations for their COP.

1 Today, you will hear one highlighted recommendation from
2 each COP. Please note that there are 14 total
3 recommendations that came out of this effort.

4 After today's presentation, CEC will work under
5 Commissioner Gallardo's leadership to begin implementation
6 planning for the recommendations.

7 With that, I would like to invite Charles Smith
8 to present on the Benefits Development COP.

9 Next slide, please.

10 MR. SMITH: Thank you, Mona.

11 Good morning, Vice Chair and Commissioners. I'm
12 Charles Smith with the Fuels and Transportation Division.
13 Happy to be here on behalf of the Benefits Development
14 Corp. And I'd like to thank the members listed here for
15 their support and time commitment on this topic.

16 As used here, benefits development refers to
17 identifying who benefits from CEC's programs, policies, and
18 investments. What do those benefits look like? And how do
19 we ensure all communities share in those benefits? We have
20 some examples of benefits identified here, such as lower
21 energy costs, job creation, and air quality improvements.

22 Next slide, please.

23 Based on the COP discussions, we've crafted a
24 recommendation for a CEC-wide assessment of approaches to
25 community benefits. In our discussions with staff from

1 multiple programs and divisions, we naturally heard a lot
2 of different approaches that teams have to defining,
3 measuring, and tracking community benefits. This applied
4 to both halves of the phrase community benefits. There
5 were lots of ways of defining communities and then lots of
6 ways of measuring benefits.

7 We believe that we have a lot to learn from one
8 another. We can learn what systems, tools, and resources
9 other teams use. At the same time, we recognize that
10 different programs have different objectives and
11 priorities, and so we wanted to respect that by not
12 pressing for a singular CEC-wide approach. We think this
13 process could also help identify potential project risks to
14 communities, not just community benefits.

15 With that, I'll thank you for your time and I'll
16 pass it over to Rachel Salazar.

17 Next slide, please.

18 MS. SALAZAR: Good morning, Vice Chair and
19 Commissioners. I'm Rachel Salazar and I led the outreach
20 and engagement, or otherwise known as O&E COP.

21 I do want to give a call out to our team members
22 and my special appreciation for the CEC staff shown here on
23 the left. We also received input from the Chair's Office.

24 So O&E is really the activities that allows staff
25 to connect with various members, and including members of

1 the public, to really help inform, educate, build and
2 maintain relationships as a two-way, you know,
3 communication. And the goal of our COP was to recommend
4 strategies that enhances CEC's meaningful engagement with
5 justice communities and tribes, as well as hard-to-reach
6 populations. and this would help to promote JAEDI
7 practices in the CEC's many processes and outcomes.

8 Next slide, please.

9 Our top recommendation is to equip staff to
10 incorporate O&E in the various CEC programs and projects by
11 developing internal resources and training for staff. We
12 realize this is more internal facing, but we kind of wanted
13 to elevate this one as our top recommendation because we
14 feel like this is going to have the greatest impact
15 throughout the Commission in reaching our external parties.
16 So examples of these resources that have been thought of by
17 the staff include clear CEC-wide goals, shared contact
18 databases and procedures for both identifying opportunities
19 and conducting O&E activities.

20 The COP also recommends leveraging existing
21 resources such as the revised DACAG equity framework, the
22 CEC's 2023 JAEDI framework, as well as outreach lists
23 maintained by the Office of Public Advisor, Energy Equity
24 and Tribal Affairs.

25 Next slide, please.

1 I will now call up Pierre Washington.

2 MR. WASHINGTON: Hello everybody, and thank you,
3 Commissioners, for giving me this time.

4 I want to give a shout out to Commissioner
5 Gallardo. Thank you for supporting this initiative and
6 also to my team members on the -- you can see on the
7 screen. They played a crucial role in helping us come up
8 with this recommendation.

9 What do we say when we mean supplier diversity?
10 It's a strategic approach to integrating small and diverse-
11 owned businesses and to our practices within CEC. Now,
12 diverse-owned businesses, those are businesses that have at
13 least 51 percent owned and operated by minority groups.
14 And our goal is to provide support and resources to help
15 minority-owned businesses compete for contracts within CEC.

16 All right, next slide, please.

17 Our top recommendation is we want to increase
18 support and guidance for small and diverse businesses to
19 help them fully participate for CEC funding. We want to
20 offer tailored support and guidance, which are crucial for
21 helping these businesses navigate the complex funding
22 process within CEC. In order to reach this outreach goal,
23 it's going to take consistent outreach to diverse
24 businesses, which will require dedicated resources, but
25 strengthening our infrastructure is necessary to enhance

1 engagement with diverse businesses.

2 And next I want to call up Molly Mahoney with the
3 Workforce Development COP.

4 MS. MAHONEY: Good morning, Vice Chair and
5 Commissioners. My name is Molly Mahoney and I am pleased
6 to present on behalf of the Workforce Development Community
7 of Practice. This was a collaborative effort assigned
8 under Vice Chair Gunda and supported by all of the lovely
9 staff names listed on this slide.

10 Broadly defined, workforce development refers to
11 a range of strategies and initiatives that aim to enhance
12 the skills and competencies of people engaged in or
13 available for work. It's about equipping people with the
14 tools, knowledge and training to meet the current and
15 future job demands. And our Community of Practice
16 discussed how the Energy Commission could begin to
17 strategize and improve and establish efforts related to
18 workforce opportunities in the clean energy space.

19 Next slide, please.

20 The top recommendation of the SET (phonetic) is
21 to establish an ongoing internal working group dedicated to
22 supporting the shared priorities and fulfilling the CEC's
23 role in its partnership agreements with the California
24 Workforce Development Board, or also known as the CWDP.
25 The working group could support meetings, workshops,

1 information sharing, and just provide feedback on CEC and
2 CWDP efforts. And we believe that creating a dedicated
3 work group will in turn increase the agency's internal
4 awareness of the increasing demand for skilled laborers and
5 contractors and electricians to install and maintain all of
6 the clean energy technology and infrastructure that we
7 need.

8 We think that we can turn this around and
9 implement that knowledge to support the design of equitable
10 policies for California's clean energy workforce ecosystem,
11 which could lead to the adoption of standard practices for
12 future solicitations and other funding mechanisms.

13 So in the future, I think it could be beneficial
14 to think about allocating funds, particularly for workforce
15 development, administrative programming, and carving out a
16 separate team to work to oversee this. But for the time
17 being, each division could have at least one staff contact
18 who they will serve as a liaison to the larger group
19 informing it about the needs of the division that they
20 represent. Because the bottom line is that if California
21 is to achieve its ambitious clean energy goals, the state
22 will need to train and support a workforce that can
23 accomplish it. So implementing this recommendation will be
24 a big step in the right direction on how we can unify our
25 approach.

1 And so next, I welcome my colleague Eunice to the
2 podium.

3 Next slide, please.

4 MS. LEMOS-ADAIR: Good morning, bom dia, and
5 buenos dias. Good morning, Mr. Chair and Commissioners.
6 Good morning, everybody here. My name is Eunice Lemos-
7 Adair. I'm a member of the Language Access Communities of
8 Practice, we call COP group. I'm filling in today for
9 Patricia Carlos, who is our group leader, but unfortunately
10 she couldn't be here today.

11 And our COP group was led by Commissioner
12 McAllister and who guided our team through the
13 recommendation process. I would like to introduce to you
14 our rest of our team, some which are not here longer at CEC
15 anymore, but they're very valuable for our team.

16 And first, I would like to say thank you for
17 Commissioner McAllister, because he is our leader and it
18 was amazing to develop this process with you. Thank you so
19 much.

20 And part of our team is Eleonore, Dorothy,
21 Valeria, Kathryn, and Katherine Dillon. Some are not here
22 anymore, but we would like to say thank you for them.

23 The main goal of the Language Access Group was to
24 create recommendations to improve CEC language services to
25 provide people with limited English proficiency equal

1 access to CEC information and services as those who doesn't
2 speak English.

3 Of the 200 languages spoken in California, some
4 of the top spoken languages other than English are Spanish,
5 Chinese, Tagalog, Vietnamese, Korean, Hindi, and Farsi, to
6 name just a couple of you.

7 Our top recommendation is to increase promotion
8 to CEC language services webpage to the public by including
9 information about translation and interpretation to CEC or
10 at CEC events. and our documents direct to the public
11 including but not limited to notes for business meetings,
12 workshops, and solicitations. The CEC already has an
13 existing language service webpage as shown as this slide.

14 Next slide, please.

15 As you guys can see, we already have this
16 service, as shown in this slide, but conducting more active
17 advertisement of available services is needed. For
18 example, at the beginning of every business meeting, we can
19 quickly mention language services available to the public,
20 let everybody know about it, because some people, they
21 don't have this sole information, and that makes access for
22 everybody. And that can be do by the Public Advisor Office
23 and direct attendees to the webpage, and as we show in
24 these slides.

25 We can also include a one-page document that

1 contains information on language services translation into
2 the top languages spoken in California. That can be easily
3 included in the last page in our posts and mail outside.
4 And that makes it easier for everybody to have access to
5 this information.

6 We hope this recommendation is feasible for the
7 Commission and we appreciate your consideration for our
8 recommendation. Thank you so much. Muito obrigada. Até
9 mais.

10 I'll pass for Mona.

11 MS. BADIE: Thank you to all our COPs and
12 leadership. I'm excited to work on implementation of these
13 recommendations.

14 Next, I'll present some of our other JAEDI-Out
15 efforts from 2023, starting with a funding recap from our
16 divisions that implement CEC funding programs.

17 This slide shows percentages of funding in
18 disadvantaged and low-income communities as defined, track,
19 and reported by each program that track these two metrics.
20 Here you will see that these programs invest more than half
21 of their funding in disadvantaged and low-income
22 communities, what CEC is now calling justice communities.
23 We're working to determine ways to track investments in
24 justice communities in our other programs that you don't
25 see on this slide.

1 Next slide, please.

2 Next, I would also like to highlight the work
3 done by CEC's Small Business and Disabled Veteran Business
4 Enterprise Advocate Office in our Administrative and
5 Financial Services Division.

6 CEC invested in 48 different small businesses,
7 amounting to 27 percent of our non-IT contracts in 2023.
8 And we invested in 21 different disabled veteran business
9 enterprises, and that's close to 3 percent of our non-IT
10 contracts in 2023. CEC does have plans to increase these
11 investments by increasing awareness of contracting
12 opportunities, enhancing networking opportunities on our
13 Empower Innovation platform, targeted outreach, and
14 providing technical assistance.

15 Next slide, please.

16 In 2023, CEC continued to actively engage with
17 the CEC-CPUC Disadvantaged Communities Advisory Group, or
18 DACAG, a statutorily created advisory body with 11 members
19 from or representing disadvantaged communities across
20 California. The DACAG advises CEC on how to design and
21 implement energy policy and programs to be more equitable
22 and effective on behalf of disadvantaged communities.

23 CEC engaged with DACAG at monthly public meetings
24 and also in smaller subject matter meetings on a range of
25 topics in 2023, including our gas R&D Program, the

1 Integrated Energy Policy Report, or IEPR, SB X1-2
2 implementation, tire efficiency, clean hydrogen funding,
3 the Equitable Building Decarb Program, both state and
4 federal funding elements, clean transportation funding
5 investments, technical assistance, and community benefits,
6 the CEC's demand -side grid support and distributed backup
7 assets programs, the 2025 Energy Code update, SB 100, EPIC,
8 and more.

9 Next slide, please.

10 Now for some highlights from our Tribal Affairs
11 Program. The CEC began 2023 with a resolution to support
12 tribal energy sovereignty at the CEC/CPUC en banc held in
13 Arcata, California. CEC has continued working towards
14 major successes in funding designed by and for tribes by
15 engaging and incorporating California Native American
16 tribes into our grant-making processes.

17 Some tribal program awards and highlights include
18 early engagement around the forthcoming \$30 million set-
19 aside in the Equitable Building Decarb Program, our initial
20 round of California's fifth assessment Tribal Research
21 Grant Program, co-development of the first-ever tribal-
22 specific Clean Transportation Program funding opportunity,
23 the largest tribal-specific funding program at the CEC, and
24 also CEC making one of the largest energy grant awards for
25 the benefit of a California Native American tribe, the

1 Paskenta Band of Nomlaki Indians for a microgrid project
2 which broke ground in 2024. The inspirational
3 groundbreaking is pictured on this slide.

4 Thank you for our amazing Tribal Affairs team and
5 for leading our important work with the California Native
6 American tribes.

7 I would now like to welcome Carousel Gore to
8 present the next portion of the JAEDI Report.

9 Next slide, please.

10 MS. GORE: Good morning, Vice Chair Gunda and
11 Commissioners. I am Carousel Gore, the Energy Commission's
12 Equal Employment Opportunity Officer, Training Office
13 Manager, and executive co-sponsor of JAEDI initiative.
14 Today, I will provide you an update on JAEDI-In with a
15 focus on our Mentorship Program, employee-led groups and
16 workforce demographics.

17 Next slide, please.

18 JAED-In is an internal focused prong of the CEC's
19 diversity effort. The primary work of JAEDI-In is the task
20 force that all staff are welcome to participate in through
21 Commission-wide meetings. Through the JAEDI-In Task Force,
22 we created several paths for employee involvement in
23 furthering justice, access, equity, diversity, and
24 inclusion with the objective to create an inclusive
25 workplace and with a culture of belonging.

1 One way we've created this environment is through
2 employee-driven efforts. The Employee Resource Groups, or
3 ERGs, are listed on the left. They are employee-created
4 and led affinity groups that are by design inclusive to all
5 employees who wish to participate.

6 Listed on the right are the Employee Synergy
7 Groups, or ESGs. ESGs are staff-led groups based on a
8 diversity of shared interests, activities, and experiences.
9 The purpose of ESGs is to create bridges between divisions,
10 disciplines, and all of us as individuals within the CEC to
11 further inclusion and belonging.

12 In 2023, the Discover CEC ESG was created by
13 Marilyn Kung and Syeda Saba. Discover CEC focuses on
14 supporting the day-to-day needs of staff who are new to the
15 Commission or to state service by providing information,
16 resources, and subject matter expertise about the
17 Commission.

18 I am excited to announce the coming of a new ESG.
19 Later this year, Eunice Lemos-Adair will launch the
20 Multilingual Library ESG. The Multilingual Library will
21 allow employees to share and borrow books in different
22 languages.

23 The Commission's ERGs and ESGs are a model for
24 other agencies. While some agencies may have one set of
25 group or the other, rarely do they have both. Multiple

1 state agencies have contacted the Commission for
2 information and guidance about establishing ERGs and ESGs
3 based on our groups and the work we have done here at the
4 CEC.

5 Next slide, please.

6 Another JAEDI achievement is the Commission's
7 Mentorship Program coordinated by Brianna (phonetic)
8 Williams. The Mentorship Program launched in 2023 and
9 hosted two cohorts with 109 mentors and mentees. The
10 Mentorship Program provides valuable support for employee
11 development while simultaneously stimulating the growth and
12 development of our mentors and allowing them to earn
13 continual leadership credits.

14 Mentors included Commission subject matter
15 experts, supervisors and managers and executive leadership,
16 including Commissioners. Mentees included staff, managers
17 and supervisors professors, and students.

18 I'd like to provide some examples of the feedback
19 we've received.

20 One mentor said,

21 "It's always valuable to mentor a colleague and think
22 through things from a different lens and remember how
23 much you can learn from everyone."

24 One mentee said,

25 "I think this was vital to me. I was having

1 difficulty adjusting to the CEC and having the mentor
2 there to provide reassurance and comfort was valuable.
3 I likely would not stayed at the CEC if not for my
4 mentor and having the accountability during this
5 cohort.”

6 In 2025, we helped to expand the Mentorship
7 Program by creating an additional track geared toward
8 teaching supervisors and managers how to coach and mentor
9 their employees.

10 Next slide, please.

11 Well, I would like to shift our focus to some
12 data on the Energy Commission’s workforce. This will be a
13 brief overview with highlights of shifts in employee
14 representation and opportunities for greater workforce
15 diversity at the Commission. We will make a more
16 comprehensive report available on the JAEDI SharePoint page
17 that will include recruitment demographic data and our
18 stimulated workforce demographics.

19 It is of note that most of the demographics are
20 based on individual self-reporting. However, there are
21 some caveats that impact the accuracy of this data. If
22 individuals did not self-identify, race or gender
23 (indiscernible) or in subsequent attempts to survey CEC
24 staff, then it was reported on their behalf by the Human
25 Resources Office, and therefore it may not be accurate.

1 Ability status data is likely incomplete. It is solely
2 based on an individual self-reporting. Therefore, if an
3 individual did not voluntarily identify their ability
4 status, it is not reflected in the information provided
5 today. The following slides will offer a comparison of
6 2022 to 2023.

7 Next slide, please.

8 From 2022 to 2023, the Commission's workforce
9 increased by 107 employees, from 653 to 760. In 2023, we
10 saw an incremental increase for Black or African American
11 and Pacific Islander representation. The most significant
12 increase was by individuals who identified as other or
13 multiple races.

14 Next slide, please.

15 Our opportunity for greater diversity is our
16 representation of persons with disabilities. In 2023, the
17 representation of persons with disabilities decreased from
18 11 percent to 9 percent. Steps the Commission is taking is
19 to ask employees to complete the disability survey to get a
20 more accurate picture of our workforce.

21 In 2023, we offered training for employees,
22 supervisors, and managers on disability-related topics,
23 including hiring persons with disabilities. The
24 Commission's Recruitment and Outreach Office has also
25 participated in various recruitment events geared toward

1 attracting potential candidates with disabilities.

2 Next slide, please.

3 Our gender representation is very closely split
4 with the six percent difference between males and females
5 in 2022. In 2023, female employee representation increased
6 by two percent, closing the gap to a two percent
7 difference.

8 Next slide, please.

9 The next two slides are focused on supervisors
10 and manager representation. In 2023, there was an increase
11 in representation of supervisors and managers and other or
12 multiple race -- in the other or multiple race category.

13 Next slide, please.

14 For gender, in 2022 and 2023, there was a greater
15 representation of women than men in leadership roles.
16 Women's representation increased by 1 percent in 2023, with
17 a ratio of females at 56 percent and males at 44 percent.

18 Next slide, please.

19 The last group I would like to highlight is
20 executive leadership. There were seven more individuals in
21 executive management roles in 2022 than in 2023. This was
22 likely due to vacancies at the time of reporting. The data
23 for this category include individuals and positions of
24 deputy director of small offices and divisions and above.
25 Our race and ethnicity demographic saw an increase of black

1 or African-American executive leaders by two percent.

2 Next slide, please.

3 We also see a greater representation of females
4 in executive leadership at 60 percent.

5 Next slide, please.

6 Before I close, I would like to extend an
7 invitation on behalf of the Chair to all Commission
8 employees to join us for the annual Unity Celebration and
9 JAEDI Awards on November 7th, starting at 11:00 a.m. at the
10 CNRA conference rooms on the second floor. This is an
11 opportunity to celebrate our unity through our diversity by
12 hearing stories of our colleagues celebrating each other's
13 contributions, food, music, and fun. Employees will
14 receive a calendar invitation soon.

15 Next slide, please.

16 As I close, I want to take a moment to celebrate
17 the beautiful tapestry of the Commission's culture. The
18 participation and support from our staff and leaders have
19 threaded greater vibrancy into a tapestry that reads unity
20 through diversity.

21 Thank you to the employees of the Commission for
22 their participation and contribution to the various JAEDI
23 efforts. The leaders of our ERGs and ESGs, our mentors and
24 mentees, each of you represent a reason for the success of
25 the JAEDI-In.

1 Thank you to the Executive Office, Drew Bowen and
2 Jennifer Martin-Gallardo, also known as Dren, for their
3 continual support.

4 Thank you, Chair, Vice Chair, and Commissioners,
5 for your commitment and support to the Commission's efforts
6 in justice, access, diversity, equity, and inclusion, not
7 just in your words, but in your actions.

8 I want to thank my EEO team for helping me
9 prepare for this presentation, Brianna Williams, Mikal
10 Mitchell, and Nancy Campbell.

11 And last but not least, my heartfelt appreciation
12 to my partners in good trouble and this worthwhile effort,
13 Commissioner Noemi Gallardo and Public Advisor Mona Badie.

14 This concludes our presentation.

15 VICE CHAIR GUNDA: Thank you so much, Carousel
16 and everyone who presented.

17 So I'll pass it to Commissioner Gallardo.

18 COMMISSIONER GALLARDO: Yes. Bravo. That was
19 wonderful. I always look forward to this item at the
20 business meeting.

21 I want to say thank you to my partners, Carousel
22 and Mona, for all that you do. And what I call this work
23 is heart work because it's going above and beyond the
24 requirements to help ensure that we're not only serving all
25 Californians, but helping ensure that all Californians have

1 opportunities to prosperity and to benefit from the clean
2 energy space. So you two are leading that on a day-to-day
3 basis. And I really appreciate that you're willing to do
4 that and you're such strong leaders and my partners.

5 I also want to recognize that this JAEDI Report
6 isn't new. We, at the Energy Commission, actually started
7 doing this back in 2016. So in 2015, there was a
8 resolution expressing our commitment to diversity. And
9 after that, we started doing these, basically what are
10 progress reports on how have we done based on those
11 commitments and where are we going.

12 And in 2019, Carousel and I arrived to the Energy
13 Commission and started changing things up a little bit and
14 eventually change this to the JAEDI Report where we focused
15 both on what we're doing internally. So JAEDI-In and -Out,
16 also externally with JAEDI-Out.

17 So along those lines, Governor Newsom also has a
18 theme of California for all, which I think aligns really
19 well with the work that we were already doing, but also
20 inspires us to do even more. And one example of that is
21 the Communities of Practice. That was actually something
22 that the Newsom administration asked us and encouraged us
23 to do, was to develop Communities of Practice that could
24 help ensure that we were embedding equity into all the work
25 that we were doing.

1 So I congratulate the leaders of the five COPs.
2 Thank you so much for all your diligence. And I also want
3 to thank their supervisors for enabling them to do this
4 additional work that's on top of their day-to-day
5 responsibilities.

6 And I wanted to emphasize a few themes that we
7 saw from the recommendations.

8 One of them was having support from leadership is
9 really important, so including the Commissioners or
10 executive office. Also training and internal resources was
11 something that everybody mentioned throughout. And then
12 also doing cross-divisional work, so making sure all the
13 divisions are included and figuring out how do we do that
14 in a way that's efficient and effective. And also a good
15 idea that I saw was including this work in work plans so
16 that we're thinking about it ahead of time.

17 And then in terms of impact, a couple of things I
18 noted here. You know, we're doing a great job on
19 investments. And I saw, Mona, that you demonstrated there
20 are a couple of programs that are dedicated 100 percent to
21 low-income disadvantaged communities that we're calling
22 justice communities now. And also on our supplier
23 diversity front, we're dedicated to doing more and better
24 moving forward. And then our guidance from DACAG has also
25 been extremely impactful. And so we appreciate that

1 they're so dedicated to us as we are to them.

2 And then also the prioritization of our tribal
3 efforts that have led to these incredible partnerships.
4 And the tribes have enabled us to do even more on clean
5 energy and get farther than we would have without them.

6 And then in terms of our culture, where we are
7 working really hard to build a culture of belonging. And,
8 Carousel, the work that you have done organizing and
9 supporting all of our employee-led groups is fantastic, and
10 I think it does make us unique. And these groups are
11 amazing. I encourage all staff to join a meeting or two if
12 you haven't already. For example, I joined the Coffee
13 Science and Culture Group and it was a fascinating
14 presentation that they did. And so just want to thank all
15 of them, also, for investing so much.

16 And then I love that you provided a, Carousel,
17 all those statistics on our demographics. I think knowing
18 the numbers helps us determine how we can do things
19 differently, better or continue some of the practices that
20 are bringing forward all these great leaders to work at the
21 Energy Commission.

22 And I'll end there. Just, you know, there's so
23 much here. We only do this once a year, so that's why it's
24 a longer presentation. But I think it is a good investment
25 for us to have this report out on, you know, what are we

1 doing, so it's not just what we say we're doing, but also
2 our actions.

3 I'll pass it over in case there are any other
4 comments.

5 VICE CHAIR GUNDA: Yeah. Thanks, Commissioner
6 Gallardo.

7 Commissioner McAllister?

8 COMMISSIONER MCALLISTER: To the whole team, I
9 mean, thanks. That was like, wow. And I, you know, I have
10 visibility in the bits and pieces, you know, through the
11 year and I provide input, but to see the whole overarching
12 just breadth of all the amazing work that's being done,
13 it's just, I mean, it makes my heart just go get a couple
14 sizes bigger, you know, like right in the moment.

15 And it also just -- I mean, I think, you know, we
16 talk about diversity and it's clearly the right thing to
17 do, but I just, I think just on a pragmatic level, just
18 being able to embrace and support all of our -- across all
19 of these axes, you know, across the whole Commission, it
20 gets us to better results, you know? And I just think
21 having, you know, creating a culture that enables that and
22 lifts people up is just so powerful. And just the example
23 that you all set within the agency, but I think across the
24 whole state government and far beyond that, frankly, is
25 just really powerful.

1 And I would be remiss not to acknowledge
2 Commissioner Gallardo. I mean, you're just the sort of the
3 beating heart of this and just providing such great
4 leadership on the JAEDI effort. So just thank you.

5 And Vice Chair Gunda, also, and the Chair. I
6 know he would, he would be here just beside himself. And
7 then Commissioner Monahan, we're all very supportive. But
8 I think the action, you know, you said the actions are what
9 really matters. And I think just to see it, you know,
10 happening in reality is just incredibly gratifying.

11 On the language front, just thanks, Eunice.
12 (Speaking Portuguese.) Oh, sorry, that's Portuguese.
13 Thanks for the whole team effort. (Speaking Spanish.) And
14 the same in Spanish.

15 But, you know, culture goes far beyond our work
16 walls. And so I just think making everyone feel fully at
17 home is incredibly important. And I, you know, just my
18 life has been, I've been very lucky to be able to live in a
19 lot of different cultures and just kind of soak them up and
20 understand how wonderful they are, you know? And just in
21 bringing them into our big state with such a diversity and
22 being able to represent that, it means a lot to me
23 personally, I know it means a lot to all of us, but clearly
24 it means a lot to all of you. So I really appreciate the
25 effort.

1 So yeah, I'll stop there. Thanks.

2 VICE CHAIR GUNDA: Thank you, Commissioner
3 McAllister.

4 I just want to begin by saying, Commissioner
5 Gallardo, to you, Mona, and Carousel, thank you for your
6 incredible leadership, you know, over the last few years.
7 I think Commissioner Gallardo, you mentioned, you know, the
8 governor's call for equity and, you know, California for
9 all. I think, you know, for all of us, as we think this
10 through, having kind of a statement to operationalizing
11 that takes an incredible amount of work.

12 I know like, you know, most of us in this room
13 share the importance of uplifting each other. While we
14 want to do that, it's a very deliberate effort that
15 requires a lot of time and sacrifice from those people who
16 feel strongly about doing that. So I just want to say
17 thank you for your leadership. And I know it wouldn't have
18 happened without the three of you.

19 Commissioner Gallardo, like even you came through
20 staff, and you kind of have the perspective of kind of both
21 leading it from a staff level and from a Commissioner
22 level, and just thank you. Thank you for all the work.

23 I do want to call out, Molly, you know, in the
24 sector that we were working on, thanks for sharing with our
25 office the documents. I really appreciate your work. But

1 again, to all the presenters, incredible work.

2 I want to just share a couple of pieces in the
3 theme of what Commissioner McAllister was sharing. As we
4 think through, I think, the inclusivity, it's really
5 important to just consider creating the conditions where we
6 come here fully and we show up fully to work wholly.

7 And you know, being kind of an immigrant coming
8 here, I attest to the culture at CEC. I've said this
9 before, it's the best place I've ever worked at. Just the
10 kind of level of feeling inclusive, being able to fully
11 show and represent who I am and bring my ideas and values
12 without feeling timid, but feeling embraced is such an
13 important element.

14 So all the work you're doing brings that, brings
15 the cohesion, brings the joy of working together, brings
16 the ability to succeed as one, in a way, day in, day out,
17 see the shortcomings of the trickle down benefits; right?
18 I mean, I think there is on one end, absolutely, you know,
19 as a state, we have been having some incredible progress
20 towards clean energy. As a macro level, the impacts are
21 something we could celebrate and feel joyful and feel
22 inspired by.

23 But as you kind of bring it to a community level,
24 bring it to like a neighborhoods level, those benefits are
25 not equal. The impacts of reliability are

1 disproportionately on justice communities. The burdens,
2 the energy burdens, are disproportionately -- the air
3 quality impacts are disproportionately on justice groups.
4 And those voices are so important to be represented here.

5 And, you know, all the things that I feel proud
6 of myself, I have an incredible number of blind spots. And
7 the only way you are able to do the best work you can is to
8 bring that courage to the team and to the place, to the
9 table where we can all talk about our different needs and
10 be able to honor them with respect.

11 So thank you, Carousel Gore and Commissioner
12 Gallardo. I think it's, you know, being a part of an
13 organization that you feel proud of is awesome, so thanks
14 for creating those conditions for us all to be proud of.
15 Thank you.

16 COMMISSIONER GALLARDO: One more thing I want to
17 note. I think, Vice Chair, you said it correctly, like
18 bringing your whole self to work is very important. And
19 when you bring your whole self to work and you can thrive
20 in a culture of belonging like this, then you're going to
21 do a lot better in all the programs, policies, and
22 practices you have that are leading to the benefits for all
23 Californians. So I think that's really important. That's
24 what we're trying to do here with the JAEDI Initiative.

25 I also missed emphasizing how important the

1 Mentorship Program has also been for helping recruit people
2 to the Energy Commission and retaining them; right? We
3 want people to feel welcomed and to stay with us. And I
4 participated in the Mentorship Program and had, you know, a
5 really incredible time with the mentee I had, got to know
6 her really well. And those are connections that I might
7 not have otherwise made were it not for this program.

8 So I encourage others who may not have
9 participated to do so, and I know not everyone has the time
10 to dedicate to it, because you do need to make a
11 commitment. But if you can, I think it's a great program
12 and folks should participate. I know Patty did, as well,
13 or Commissioner Monahan did as well, and she really enjoyed
14 it.

15 So thank you, all of you. So Charles, Rachel,
16 Molly, Pierre, and Eunice, you did incredible presenting.
17 I know it took time today from your schedule to do this,
18 but we are grateful to you and you're making an impact at
19 the Energy Commission and for the entire state. Thank you.

20 VICE CHAIR GUNDA: Thank you all.

21 And we will now move to item six. So I'm kind of
22 looking at the clock. It's about 11:40. We are going to
23 start an item on the Codes at one o'clock. So we'll try to
24 take a lunch break prior to that and kind of have a firm
25 start at one.

1 So, with that, let us kind of go to item six.

2 MR. KNIGHT: Good morning, Commissioners. Eric
3 Knight, Manager of the Siting and Environmental Branch in
4 the Siting, Transmission, and Environmental Protection
5 Division. I'm joined by Senior Attorneys Crystal Cabrera
6 and Alex Mayer from the chief counsel's office. I'll be
7 presenting on the amendments to the Opt-In Certification
8 Regulations.

9 Next slide, please.

10 The Opt-In Certification Program is a relatively
11 new CEC program for the certification of non-fossil fuel
12 power plants, energy storage facilities, and related
13 facilities. The program requires local agencies to review
14 Opt-In applications and allows them to seek reimbursement
15 for the review in response to a request from the CEC.

16 To provide clarity in regulatory directions,
17 staff is proposing amendments to the Opt-In regulations to
18 specify the reimbursement procedures. The amendments are
19 similar to existing processes for -- in CEC's Application
20 for a Certification Licensing Program with limited
21 modifications to comport the Opt-In process and for
22 clarity. Staff is proposing adoption of these regulations
23 through the emergency rulemaking process as explicitly
24 authorized by the statute.

25 Next slide, please.

1 This action provides a benefit to Californians by
2 clearly articulating process by which local agencies may be
3 reimbursed, so local agencies can more efficiently and
4 consistently satisfy reimbursement requirements, and the
5 CEC can more efficiently analyze proposed budgets and
6 invoices. Streamlining the review of Opt-In applications
7 supports the state's accelerated efforts to address climate
8 change and grid reliability.

9 Next slide, please.

10 Now I'll give a brief overview of the proposed
11 amendments, which are described in more detail in the
12 backup materials for this agenda item.

13 Section 1878.1 will define costs which are
14 eligible for reimbursement including lost permit fees local
15 agencies would otherwise receive for an Opt-In
16 application -- or excuse me, for an application for an Opt-
17 In facility. It will also define costs which are not
18 eligible for reimbursement. Third, it will provide
19 procedures for approving budgets for reimbursement. And
20 finally, it will provide procedures for resolving disputes
21 tailored to the Opt-In Program.

22 As I said earlier, these procedures closely track
23 procedures in the Application for Certification Program.

24 Next slide, please.

25 The proposed regulations are necessary to clarify

1 how local agencies may request reimbursement for the review
2 of Opt-In application and lost permit fees. The procedures
3 are consistent with the statutory authority that authorizes
4 the reimbursement local agencies and they are consistent
5 with the existing regulations with modifications tailored
6 to comport with the Opt-In process and statute.

7 Next slide, please.

8 This slide provides examples of clarifications
9 that will result from adopting the proposed regulations.
10 First, proposed section 1878.1 clarifies that certain
11 attorney fees are not eligible for reimbursement. I will
12 note that legal fees reasonably related to responding to
13 Commission requests may be eligible for reimbursement.

14 The regulations would also clarify that Executive
15 Director will resolve disputes. This clarification is
16 necessary because the Opt-In process does not utilize
17 committees as part of the review of a application.

18 Next slide, please.

19 CEC began accepting public comments ten days
20 before the August business meeting. On August 30th, CEC
21 re-noticed this item for the September business meeting.
22 The deadline for the comment period was September 9th.

23 In total, the CEC received one comment from one
24 local agency. The CEC staff met with counsel for the local
25 agency and discussed their comment. There were no changes

1 to the final text of the regulations as a result of the
2 comment.

3 Next slide, please.

4 This slide provides a timeline for the emergency
5 rulemaking process. If the Commission approves the
6 regulations today, staff will submit the rulemaking package
7 to the Office of Administrative of Law, OAL, on September
8 12th, 2024. The OAL public comment period would be from
9 September 12th through September 17th, 2024. If OAL
10 approves, it will file the approved regulations with the
11 Secretary of State. CEC staff is targeting effective date
12 of September 23rd, 2024.

13 Next slide, please.

14 The proposed resolution and the CEQA memo
15 contained in the rulemaking docket explain why adoption of
16 the proposed emergency regulations is exempt from CEQA.
17 For these reasons, and for the reasons presented today and
18 into the record, staff asked the Commission to find that
19 this action is exempt from CEQA and approve the resolution
20 adopting the proposed amendments to the Opt-In regulations.

21 That concludes my presentation and staff is
22 available for any questions you may have. Thank you.

23 VICE CHAIR GUNDA: Thank you, Eric, for the
24 presentation.

25 Let's go to public comment.

1 MS. BADIE: Good morning again. The Commission
2 welcomes public comment on item six at this time. If
3 you're joining us in the room, we're asking folks to use
4 the QR code or raise their hand. And if you're joining on
5 Zoom, you'll use the raise-hand feature on your screen or
6 press star nine if joining by phone. That'll let us know
7 you'd like to comment on this item. And just giving that a
8 moment here.

9 All right, I'm not seeing any raised hands for
10 this item, so back to you, Vice Chair.

11 VICE CHAIR GUNDA: Thank you.

12 And with that, we'll go to Commissioner
13 discussion.

14 Commissioner Gallardo?

15 COMMISSIONER GALLARDO: Thank you, Vice Chair.

16 Excellent presentation, Eric. Thank you so much
17 for that. I won't speak too long, just want to emphasize
18 that the Opt-In Certification Program is an important
19 program. It's part of the state's action plan to enable
20 more clean energy resources to be available and in a way
21 that also delivers more benefits to local communities.

22 We have about six applications filed and a
23 potential for about seven more coming up in the next
24 months. So it is critical for us to provide clarity and
25 also consistency for, you know, for these local

1 jurisdictions in terms of, you know, where the projects are
2 proposed, what they can get reimbursed for, et cetera. And
3 we also try to do this for applicants as well, making sure
4 that they have clarity on what they can do.

5 So this change will help ensure that those local
6 jurisdictions understand, you know, what they can request
7 for reimbursement. And of course, our staff is available
8 to local jurisdictions and applicants for any additional
9 questions.

10 We do have the authority to be able to make these
11 changes and also to do them as emergency rulemaking. So we
12 need to move this fast in order to help ensure that those
13 local jurisdictions have what they need to do their
14 business as well.

15 So I'll pass it on if there are any other
16 comments.

17 VICE CHAIR GUNDA: Commissioner McAllister, do
18 you have a comment?

19 COMMISSIONER MCALLISTER: Excellent presentation,
20 Eric. I really appreciated the briefing and I really think
21 you've done a great job bringing this to us, so I don't
22 have any substantive comments. I really appreciate it.

23 VICE CHAIR GUNDA: Yeah, thank you, Commissioner
24 McAllister.

25 Eric, thank you so much for the presentation. I

1 think I just wanted to note, since Governor Newsom has
2 taken -- you know, started his tenure as governor, we will
3 be adding about 27,000 megawatts of resources by the end of
4 this year. You know, that's a significant amount. The SB
5 100 calls for adding six to eight gigs a year. We've done
6 that a couple of years now. And then this year we might be
7 hitting ten gigs. And the more we admit here, the more
8 it's needed and it's not going to stop. It's not a sprint.
9 It's kind of a long sprinting marathon for the next 20
10 years.

11 And when we think about the SB 100 goals, I think
12 it's good for us to continually remind ourselves, we're
13 talking about building a lot of new energy resources. And
14 I personally, you know, feel on two fronts, one, the STEP
15 has incredible capacity and rigor and, you know, you have
16 been doing this AFCs and other work with such clarity with
17 local governments. I think, you know, and all the
18 partners, I just appreciate the way STEP does work, the
19 Siting Division.

20 But on the top of that, I think this is a
21 necessity for our clean energy transition, as Commissioner
22 Gallardo mentioned. So I look forward to supporting it. I
23 look forward to continuing to support the team and the
24 Executive Office and all this work. Thank you.

25 So with that, let's move the item to a vote.

1 Commissioner Gallardo, would you like to move?

2 COMMISSIONER GALLARDO: Yes. I move to approve
3 item six.

4 COMMISSIONER MCALLISTER: Second.

5 VICE CHAIR GUNDA: So let's go to the vote.

6 Commissioner Gallardo?

7 COMMISSIONER GALLARDO: Aye.

8 VICE CHAIR GUNDA: Commissioner McAllister? Aye.

9 VICE CHAIR GUNDA: Thank you. My vote is aye as
10 well. The item passes three-zero. Thank you.

11 So given that we only have 12 minutes to 12:00,
12 so we'll try to take a break and circle back about one
13 o'clock to start the Building Code item. I would
14 appreciate everybody being back in the room about 12:55 so
15 we can get started right at one. Thank you so much.

16 (Off the record at 11:48 a.m.)

17 (On the record at 1:00 p.m.)

18 VICE CHAIR GUNDA: Thank you, everybody. Welcome
19 back. We're going to get started with item seven.

20 We will be joined by Chair Hochschild. Can
21 somebody confirm that Chair is online? He may join us.

22 So with that, let's kind of move to item seven,
23 adoption of 2025 California Energy Code.

24 Welcome Gypsy to present. Thank you.

25 COMMISSIONER MCALLISTER: Hey, Gypsy, could you

1 just put the microphone just a tiny bit closer?

2 MS. ACHONG: Oh, there we go.

3 COMMISSIONER MCALLISTER: There you go, yeah.

4 MS. ACHONG: I'm Gypsy Achong, representing the
5 Building Standards Branch of the Efficiency Division.

6 Thanks to the Commission for including consideration of
7 adoption of the 2025 Energy Code on today's agenda.

8 Next slide, please.

9 Since passage of the landmark Warren-Alquist Act
10 in 1974, California has been developing Energy Code, which
11 has led to over \$100 billion in energy cost savings for
12 Californian households and optimized timing of energy used
13 periods when power is cleaner.

14 In this graph, we've plotted electricity use per
15 person from 1960 through 2020. The per capita use for the
16 U.S. is in blue and California is in green. This graph
17 shows that California has experienced nearly constant per
18 capita energy use in the state, even during periods when
19 per capita energy use was growing nationally. We know that
20 the Energy Code is only one of the many factors that have
21 contributed to this trend, but we do believe it's one of
22 the factors.

23 Next slide, please.

24 Staff of the Building Standards Branch of the
25 Energy Commission are pleased to propose the 2025 Energy

1 Code, which is estimated to save almost \$5 billion in
2 energy costs, reduce over 4 million metric tons of
3 greenhouse gas emissions over 30 years, which equates to
4 the annual energy use of over half a million homes.

5 For each Code cycle, staff estimates the benefit-
6 to-cost ration of the update. To calculate the benefit of
7 the update, we add the energy cost savings of all of the
8 measures in the update. We divide that total benefit by
9 the total cost of all of the measures included in the
10 update, including the cost of purchase and maintain
11 equipment. The accounted benefits do not include co-
12 benefits such as public health improvements due to reduced
13 pollution.

14 For the proposed 2025 Energy Code, we estimate
15 the benefit-to-cost ratio at seven. In other words, we
16 estimate that this Code will produce seven times the energy
17 cost savings to the cost. We anticipate that this Code
18 will further encourage builders to use heat pumps. We're
19 estimating at least 500,000 heat pumps over the next three
20 years. Our updates on PV and battery are estimated to save
21 about 300 gigawatt hours per year, reduce power demand by
22 about 1 megawatt per year, all while maintaining the
23 Commission's policy of minimizing PV exports to the grid.

24 We are also positioning owners of newly
25 constructed commercial kitchens and multifamily buildings

1 equipped with central heat pump water heaters to use
2 cleaner public with their electric equipment when they're
3 ready.

4 Next slide, please.

5 This slide summarizes the extensive public
6 process that we've engaged in to get to the proposed 2025
7 Energy Code, including 33 public workshops with three days
8 of lead Commissioner hearings, one 45-day public receive a
9 15 day public comment period, two 15-day public comment
10 periods, resulting in numerous comment letters and
11 connections with stakeholders.

12 We note that if the Commission adopts the 2025
13 Energy Code updates today, we will send this package to the
14 California Building Standards Commission for approval. If
15 approved the 2025 Energy Code will be effective January 1,
16 2026.

17 Next slide, please.

18 There are three sections to the rest of this
19 presentation. First, we will summarize the major changes
20 to the 2025 Energy Code that contributed to the energy and
21 greenhouse gas savings discussed earlier. Next, we will
22 discuss our obligations related to the California
23 Environmental Quality Act, also known as CEQA. And
24 finally, we will request action from the Commission.

25 I will discuss four measures in detail. Heat

1 pumps, electric-ready requirements, solar energy and
2 battery storage, and fuel belt verification and diagnostic
3 testing. I will also cover a few other important measures
4 together at the end of this section.

5 Next slide, please.

6 In 2025, while ensuring the Code continues to
7 preserve fuel choice and ability to use all federally
8 covered products, we are also advancing heat pumps in
9 California in a number of ways. I want to recognize the
10 key contributors behind these measures, which are Bach
11 Tsan, Stephen Becker, and Ron Balneg.

12 A single-family standard design uses heat pumps
13 for both water and space heating. A low-rise multifamily
14 standard design uses heat pump water heaters for systems
15 serving individual dwelling units.

16 In existing commercial buildings, we are
17 requiring new or replacement rooftop package units less
18 than 65,000 BTUs per hour for heat pumps. We are also
19 establishing heat pump control requirements to better
20 ensure that the real world performance of this equipment
21 matches our expectations.

22 Finally, after extensive stakeholder We are
23 instituting prescriptive multi-zone space conditioning
24 system-type requirements for offices and schools 150,000
25 square feet or less and five habitable stories or less.

1 That's a mouthful. Multi-zone systems serve large spaces
2 comprised of different zones. Imagine a floor in an office
3 building such as this one. Offices conference rooms,
4 bathrooms, kitchens and open layout spaces may all be
5 separate zones served by a multi-zone system.

6 Next slide, please.

7 In 2025, we are continuing to advance electric
8 readiness. Danny Tam is the key contributor behind this
9 measure that sets up owners of newly constructed commercial
10 kitchens and multifamily buildings equipped with central
11 heat pump water heaters to use cleaner electric equipment
12 when they are ready.

13 We've also responded to stakeholder feedback in
14 updating electric-ready requirements for heat pump water
15 heaters serving individual dwellings in multifamily
16 buildings.

17 Next slide, please.

18 In 2025, we updated requirements for multifamily
19 and nonresidential buildings in light of revised net
20 billing and virtual net billing rules while minimizing grid
21 exports. The key contributors to these measures were
22 Mohammed Saeed and Sahar Daemi.

23 In addition to updating requirements for low-
24 rise/high-rise multifamily and nonresidential buildings, we
25 also added requirements for event and exhibit buildings,

1 religious worship buildings, and sports and recreation
2 buildings.

3 Next slide, please.

4 In 2025, we moved the field verification and
5 diagnostic testing requirements to Title 24. Joe Loyer and
6 Chang Moa (phonetic) have been the champions of these
7 measures. We renamed the home energy rating system
8 program, also known as HERS, to the Energy Code Compliance
9 Program. We are reestablishing the focus on consumer
10 protection. We strengthened conflict of interest
11 protections and the quality assurance process and are more
12 clearly outlining responsibilities of members of the field
13 verification and diagnostic testing community, including
14 providers, raters, and rater companies.

15 Next slide, please.

16 In addition to the measures described in the
17 previous slides, we would like to highlight the following
18 measures. Danny Tam has spearheaded requirements for more
19 efficient pool and spa heating systems. Simon Lee
20 addressed stakeholder feedback on streamlining our lighting
21 requirements. And Anushka Raut proposed
22 compartmentalization requirements that will enhance indoor
23 air quality and reduce occupant complaints related to noise
24 and smells in multifamily dwelling units.

25 Next slide, please.

1 As adoption of the revised standards is a
2 discretionary project under the California Environmental
3 Quality Act, CEQA, CEC staff have determined that CEQA
4 applies to the adoption of the 2025 Energy Code.

5 Staff prepared an initial study and proposed
6 negative declaration that complies with CEQA. We have
7 found that there is no substantial evidence in light of the
8 whole record that the proposed 2025 Energy Code will have a
9 significant adverse the Commission's findings. We have
10 received no responsive comments on the initial study and
11 proposed negative declaration.

12 Next slide, please.

13 So today we asked the Commission to, first,
14 approve the initial study and adopt the negative
15 declarations based on its findings.

16 Second, we ask that the Commission adopt the
17 proposed 2025 update to the California Energy Code,
18 inclusive of, first, the errata identified in the
19 resolution and including additional errata read into the
20 record below, and specific -- so first, the sections
21 identified that the Commission does not adopt the specified
22 in the resolution as do not adopt, so let me explain that
23 in response to stakeholder feedback staff is requesting
24 that the Commission does not adopt the proposed text in
25 these specific sections, which are lined out in the

1 resolution, and instead retain the existing Energy Code
2 language. Staff will continue to evaluate the measure
3 proposals for the next Code cycle.

4 Additional errata to be read into the record are
5 page 340, section 140.4(b)(3)(A)(i), "Remove reference to
6 ASHRE equipment volume and applications volume for clarity
7 and consistency." The text should read, "Outdoor design
8 conditions shall be selected from reference joint Appendix
9 JA-2," which is based on data from the ASHRAE climatic data
10 for region X or the ASHRAE Handbook fundamentals volumes --
11 fundamentals volumes, sorry. This is a typographical
12 clerical error that has been removed in other sections of
13 the August 2024 15-day express terms and could lead to
14 confusion if not corrected in section 140.4 as well. The
15 change does not have a substantive regulatory effect.

16 Next slide, please.

17 So that finishes the bulk of this talk. I am
18 honored to present the 2025 Energy Code here on behalf of
19 the Building Standards Branch. But as many of you know, I
20 joined this team after most of the hard work was already
21 completed. Throughout the presentation, I tried to
22 highlight key subject matter experts. In this closing
23 slide, I have listed other heavy lifters for this Energy
24 Code. I beg your patience as I call out a few
25 contributors.

1 First of all, Commissioner McAllister, who carves
2 out time from his busy schedule to regularly provide
3 guidance and cheer us on.

4 Bill Pennington, who has lived and breathed the
5 Energy Code for most of his career, and the cycle was no
6 different.

7 Ken Rider, who is always willing to find time to
8 brainstorm creative solutions to issues that come up in the
9 process.

10 Michael Murza and his team in the Chief Counsel's
11 Office who closely partner with our technical team as we
12 developed this Code,

13 Michael Sokol and Will Vicent who provided
14 context, guidance and support throughout this effort.

15 Javier Perez who kept this effort moving forward
16 efficiently and always encouraged us to strive for clarity
17 and stakeholder engagement.

18 Oayam Bozorgchami who was involved with every
19 change in this document.

20 Mikey Shewmaker, who managed the standards
21 development team. Everyone else at the CEC who jumps in at
22 a moment's notice.

23 And finally, I would like to thank all the
24 stakeholders, including our contractors, the IOU Case
25 Teams, and everybody else who have tirelessly contributed

1 to improving this Code at each step. Thank you.

2 VICE CHAIR GUNDA: Thank you, Gypsy.

3 Before we go to public comment, just want to
4 acknowledge that Chair Hochschild has joined, as well, and
5 he's joining us through Zoom.

6 With that, Mona, can we go to the public comment,
7 please?

8 MS. BADIE: Thank you. The Commission now
9 welcomes public comment on item seven. If you're in the
10 room with us, we're asking folks to use the QR code. We've
11 already got some folks signed up. I'll also take a show of
12 hands as well. And if you're joining us on Zoom, please
13 use the raise-hand feature. It looks like an open palm on
14 your screen. And if you're joining by phone, you'll press
15 star nine. That's going to let us know you'd like to
16 comment and you can raise your hand at any time. We're
17 going to call on comments as they're in order received,
18 starting with the in room commenters.

19 So first I'll invite Kelly Cunningham to come
20 approach the podium.

21 Kelly, if you could please spell your name for
22 our record, as well? And we're asking for comments to be
23 two minutes or less. There's going to be a timer on the
24 screen. Thank you.

25 MS. CUNNINGHAM: Kelly Cunningham, K-E-L-L-Y

1 C-U-N-N-I-N-G-H-A-M, Pacific Gas & Electric, and I'm ready.

2 Thank you.

3 The California Statewide Utility Codes and
4 Standards Enhancement Team, the Case Team, supports the
5 adoption of the 2025 Energy Code should it occur today.
6 Pacific Gas & Electric, San Diego Gas & Electric, Southern
7 California Edison, Los Angeles Department of Water and
8 Power, and Sacramento Municipal Utility District supported
9 this effort.

10 The utilities and our partner team would like to
11 thank the many stakeholders who worked with us to develop
12 proposals that are cost-effective, feasible, and
13 enforceable, Commission staff for creating and maintaining
14 a platform for open discussion, in particular, Javier
15 Perez, Payam Bozorgchami, Michael Shewmaker, Will Vicent,
16 and Gypsy Achong, and Commissioner McAllister for his
17 continued commitment to advancing Building Codes and the
18 energy and climate benefits that they achieve.

19 Throughout this cycle, the Case Team, we
20 developed 60 unique proposals. It's a lot of work, 44 of
21 which will hopefully be adopted today, providing technical,
22 market, economic, energy impacts and cost effectiveness
23 information required to make informed judgments on the
24 proposals. We appreciated the opportunity to provide input
25 on proposals by Commission staff and other stakeholders.

1 This includes the continued work to assure that the clean
2 energy transition, which includes the increased use of heat
3 pumps in residential and commercial buildings is practical
4 for designers, cost effective and enforceable, and we look
5 forward to continuing to prepare for implementation.

6 We also applaud the investment in revising the
7 Code so that it is easier to apply in practice, including
8 refining the lighting requirements with input from a
9 diverse set of experts and continued improvement in the
10 multifamily section. Compliance is essential to Code
11 realizing its potential. Energy Code Ace will offer
12 compliance support, and we are proud to support this
13 adoption and committed to continuing for the next cycle.

14 Thank you.

15 MS. BADIE: Thank you.

16 Next, we're going to hear from Christopher
17 Malotte. Excuse me if I've mispronounced your name. If
18 you could please approach the podium? We're asking for
19 comments to be two minutes or less. There will be a timer
20 on your screen. And just a reminder to please spell your
21 name for the record before beginning.

22 MR. MALOTTE: Thanks. Christopher Malott,
23 C-H-R-I-S-T-O-P-H-E-R, last name Malotte, M-A-L-O-T-T-E,
24 representing Southern California Edison. Thank you, Chair
25 and Commissioners.

1 Southern California Edison strongly supports the
2 adoption of the proposed amendments of the Energy Code.
3 Proposed amendments of the 2025 Title 24, Part 6 are
4 projected to achieve estimated electricity savings of 400
5 gigawatt hours per year, thereby reducing state greenhouse
6 gas emissions by approximately 177,000 metric tons of
7 carbon dioxide annually. These measures represent
8 significant strides toward California's carbon neutrality
9 goals by 2045.

10 The Title 24 -- the 2024 Energy Code amendments
11 will facilitate the equitable and cost-effective transition
12 of various building types, the introduction and updating of
13 prescriptive heat pump standards, heat pumps for domestic
14 hot water systems, and the establishment of electric ready
15 requirements for multifamily domestic hot water systems are
16 pivotal steps in achieving carbon neutrality by 2045.

17 Additionally, I recognize the importance of the
18 CEC's introduction of multi-zone concepts in this Code
19 cycle, which align with Cal/OSHA's recently adopted
20 standards to protect workers from indoor heat, particularly
21 in warehouses and restaurants. These concepts will foster
22 innovative building designs that provide comfortable indoor
23 environments, accommodating varying indoor operating
24 temperatures.

25 I would like to express my gratitude to all the

1 CEC staff for their diligent efforts in proposing these
2 Energy Code amendments. I particularly appreciate the
3 numerous public workshops, stakeholder meetings, and the
4 lead Commissioner hearings, all of which have contributed
5 to an open and transparent hearing process.

6 In conclusion, Southern California Edison fully
7 supports the adoption of the proposed Energy Code
8 amendments and extends sincere thanks to the CEC staff,
9 with special recognition to Commissioner McAllister for
10 leading the three-day lead Commissioner hearings.

11 Thank you very much.

12 MS. BADIE: Thank you.

13 I don't have any other raised hands in the room.
14 I'm going to transition to Zoom. If there's anyone else in
15 the room, we can check back after their Zoom participants.

16 So first we have Bob Raymer.

17 Bob, I'm going to open your line. You'll have to
18 unmute on your end. We are asking for comments to be two
19 minutes or less.

20 MR. RAYMER: Thank you, Mr. Chairman and
21 Commissioners. I'm Bob Raymer, that's R-A-Y-M-E-R. I'm
22 representing the California Building Industry Association,
23 the Building Owners and Managers Association, and the
24 California Business Properties Association. And today I'm
25 speaking in favor of adopting the standards that are before

1 you.

2 We would like to extend special thanks to
3 Commissioner McAllister for his guidance and his oversight
4 of this past two and a half years, and to CEC staffers
5 Gypsy, Javier, Will Vicent, Danny Tam, Bill Pennington, and
6 a host of others.

7 But especially to Payam Bozorgchami, and former
8 CEC staffer, Mazi Shirakh. Payam oversaw the detailed
9 analysis the industry did, sharing it with CEC staff,
10 identifying areas that needed work, and providing
11 clarifications to our analytical team at Consul. Mazi
12 provided backup support on the analysis, and confirmed our
13 findings. We were pretty much in daily contact during a
14 very short period of time of two months to get all of this
15 done. Working together, we identified and resolved a few
16 issues with the new LSC metric. Most notably, we found a
17 solution that balanced the need to move forward with the
18 LSC metric while ensuring the critical summer peak lows
19 would continue to be adequately dressed. So a huge thank
20 you to Payam and Mazi.

21 Regarding the nonresidential standards, we
22 support the CEC's limited exception for rooftop PV on
23 multi-tenant commercial buildings. This comes on the heel
24 of the PUC's adoption of the updated VNEM rules. We teamed
25 up with the solar industry and successfully got the PUC to

1 revise their VNEM proposal for multifamily buildings.
2 However, we were unsuccessful in getting the same change
3 for VNEM and the commercial building sector. (Clears
4 throat.) Excuse me. We continue to pursue this issue with
5 the administration, the PUC and the legislature, but this
6 always takes time.

7 Once again, we ask for your support in adopting
8 these regulations. Thank you, and that concludes my
9 comments.

10 MS. BADIE: Thank you.

11 Next, we're going to hear from Sam Fishman.

12 Sam, I'm going to open your line. We're asking
13 for comments to be two minutes or less.

14 MR. FISHMAN: Oh, thank you. My name is Sam
15 Fishman, S-A-M-F-I-S-H-M-A-N, and I'm representing SPUR.

16 I'd like to thank the Commission and urge that
17 the Commission adopt the proposed Energy Code. This Code
18 would be a win for climate, air quality, and resilience.
19 The Code would ensure the vast majority of homes are built
20 with healthy electric equipment for space and water
21 heating, which would align with both the Bay Area's Air
22 District's appliance rules and help our region transition
23 to clean and climate-friendly buildings.

24 Building on the Green Foundation the CEC laid
25 with its 2022 Code, this latest Code would take several

1 significant steps towards climate-friendly homes and
2 buildings. It would expand existing requirements for new
3 homes to encourage heating for both space and water with
4 heat pumps. It would help transition certain commercial
5 buildings towards clean heating. And it would propose
6 important efficiency and electric-ready measures that will
7 reduce costs for Californians. All of these measures will
8 help Californians breathe healthier air and achieve
9 ambitious climate goals set by the state.

10 Despite all of these positive changes, I think
11 there were some missed -- some critical opportunities that
12 were missed in this Code, in particular, opportunities to a
13 proposed language that would have encouraged AC units to be
14 replaced with heat pumps. We think moving forward,
15 additional steps to require or strongly encourage AC to
16 heat pump replacements can help us reach our ambitious
17 goals of achieving 6 million heat pumps by 2030 and
18 aligning with stronger appliance standards in the Bay Area
19 and that are being developed at the state level as well.

20 Thank you so much for your time.

21 MS. BADIE: Thank you.

22 Next, we're going to hear from Krysta Wanner.

23 Krysta, I'm going to open your line. We're
24 asking for comments to be two minutes or less, and please
25 spell your name for the record before you begin.

1 MS. WANNER: Krista Wanner, K-R-Y-S-T-A
2 W-A-N-N-E-R with Western Propane Gas Association.

3 First, I'd like to thank CEC staff for meeting
4 with us to discuss key concerns, our main concern being
5 that the draft language of the 2025 Building Energy
6 Efficiency Standards could be construed as a violation of
7 EPCA and preempted by federal law. The 2025 performance
8 path will, in practice, effectively ban or prevent certain
9 fuels from being used across all climate zones and thus
10 functions as a de facto ban.

11 Additionally, the new Codes would obstruct new
12 homeowners from being easily able to choose propane
13 furnaces as an affordable option for their house heating
14 needs by requiring additional efficiency measures that
15 create cost barriers to consumers and add to the state's
16 already looming housing affordability crisis. For colder
17 climate zones in California, in multiple climate zones,
18 propane, especially renewable propane, can improve the cost
19 and energy efficiency to consumers.

20 Finally, not currently being considered in the
21 2025 fees is that of dual fuel heating systems. The
22 propane industry is working with appliance manufacturers to
23 bring new appliances to market that maximize energy
24 efficiency, minimize energy waste, and work to reduce
25 burden on the grid during times of crisis. There are

1 currently systems available for purchase with efficiencies
2 of 98 percent.

3 We ask that these topics be taken into
4 consideration for the 2025 fees and thank you for your
5 time.

6 MS. BADIE: Thank you.

7 Next, we're going to hear from Sean Armstrong.

8 Sean, I'm going to open your line. We're asking
9 for comments to be two minutes or less and just a reminder
10 to spell your name before beginning your comment.

11 MR. ARMSTRONG: Thank you very much. I'm Sean
12 Armstrong, S-E-A-N A-R-M-S-T-R-O-N-G. I'm the Managing
13 Principal of Redwood Energy. And I'm calling in to support
14 the adoption of the double heat pump baseline.

15 I've supported the cost-effective design of more
16 than 30,000 California affordable housing apartments using
17 heat pumps for both water and space heating since 2007, all
18 the while having a double gas baseline. There's no
19 prohibition on gas furnaces or gas water heaters in this
20 Code, no more than there's been a prohibition on all
21 electric construction with heat pumps for water heating and
22 space heating. It is simply the Code. There are options.
23 You go through the Code for those options. I've been able
24 to do it. The Western Gas Association can certainly do
25 what I have had to do with my hands tied behind my back.

1 So this Code reflects that heat pumps are
2 superior products in construction. They simplify design.
3 They speed infrastructure installation. They lower
4 construction costs. And they reduce jobsite dangers.

5 Since 2009, there have been cold climate heat
6 pumps for HVAC in the United States, although they're
7 scarcely needed in California's mild winters, and this 2025
8 Code finally reflects the current state of technology. It
9 is unfortunate that more retrofits were not established
10 with the heat pump baseline, and it's unfortunate that the
11 CEC did not adopt more PV requirements, both of which are
12 cost effective over the CEC's analytic timeframe. Those
13 are opportunities lost.

14 However, I fully support the many improvements
15 this Code represents, and I look forward to helping staff
16 and the state of California accomplish the climate goals
17 that we have legally set out in front of ourselves.

18 Thank you very much.

19 MS. BADIE: Thank you.

20 Next, we're going to hear from Jenny Sivie.

21 Jenny, I'm going to open your line. If you could
22 please spell your name before beginning? We're asking for
23 comments to be two minutes or less.

24 MS. SIVIE: Thank you. This is Jenny Sivie. Can
25 you hear me?

1 MS. BADIE: Yes.

2 MS. SIVIE: Okay, J-E-N-N-Y S-I-V-I-E. I
3 represent Norman S. Wright Mechanical Equipment, and I
4 would like to comment on the VRF in this Code.

5 Norman S. Wright Mechanical Equipment submits
6 this response to the California Energy Commission in
7 justification for CEC proposed revisions to the 2025 Energy
8 Code, section 140.4(a)(3) on multi-zone space conditioning
9 system types to support the August 15-day comment period
10 variable refrigerant flow, BRF, systems for schools
11 published on August 22, 2024.

12 Norman Wright supports CEC's expansion to use the
13 use of heat pump to further California's need for
14 decarbonization and provide effective energy use reduction.
15 Specifically, we appreciate CEC's modification to sections
16 140.4(a)(3), which now includes a prescriptive allowance
17 for the use of VRF systems that incorporates a refrigerant
18 loop heat recovery with a dedicated outdoor air, DOAS,
19 system for space conditioning in certain office buildings
20 and schools.

21 In review of the cost analysis, Norman S. Wright
22 believes that the estimates for VRF indoor and outdoor
23 units to be overstated by 20 to -- sorry, 30 to 40 percent.
24 The additional elements such as piping are estimated to be
25 overstated. We estimate the market average of a new

1 installation of a complete 48-ton VRF system, including
2 indoor and outdoor units, piping, ductwork, condensate
3 drains, and controls with DOAS would be \$7,000 to \$9,000
4 per ton. Some of the comments have suggested these costs
5 to be about \$16,500 per ton, a grossly overestimated
6 estimation which should be excluded from considerations.

7 Additionally, the feedback from districts and
8 facility staff has shown that the acoustical benefit,
9 reduced energy costs, and reduced yearly maintenance costs
10 have helped to offset any higher first costs they've seen.

11 We appreciate the Commission's time and strongly
12 support cost analysis and the changes made to Section
13 140.4(a)3).

14 MS. BADIE: Thank you.

15 Next, we're going to hear from Todd Titus.

16 Todd, I'm going to open your line. Please spell
17 your name for the record. We're asking for comments to be
18 two minutes or less. Your line is open. You'll just have
19 to unmute on your end.

20 MR. TITUS: There it is. Can you hear me now?

21 MS. BADIE: Yes.

22 MR. TITUS: Thank you. Todd Titus, T-O-D-D
23 T-I-T-U-S, and I'm representing the Heating, Air-
24 conditioning, and Refrigeration Distributors International,
25 also known as HARDI.

1 I would like to thank the Commission for the
2 opportunity to provide feedback and comments on the
3 proposed updates for the 2025 Building Energy Efficiency
4 Standards. HARDI is a trade association comprised of over
5 800 member companies, more than 450 of which are U.S.
6 based and wholesale distribution companies, including 60
7 companies operating within California.

8 HARDI respectfully asked that the California
9 Energy Commission proposed updates for the 2025 Building
10 Energy Efficiency Standards be revised to not
11 prescriptively ban the installation of fossil fuel systems.
12 If enacted as currently proposed, the 2025 Building Energy
13 Efficiency Standards would remove consumer choice for water
14 and space heating, create an adverse economic impact for
15 California citizens, and violate the Environmental Policy
16 and Conservation Act, EPCA.

17 The proposed space and water heating requirements
18 remove consumer choice for the HVACR systems due to HARDI
19 believing that it -- excuse me, because HARDI believes in
20 protecting consumers rights to purchase and install
21 whichever style of HVACR product they prefer. Sections
22 detailed in our official submitted comments outline heat
23 pump requirements for space conditioning systems that
24 remove consumer choice for offices, schools, and
25 residential buildings. The unnecessary cost of buildings

1 that would not improve the energy use energy efficiency of
2 the space or water heating for the home effectively drive
3 consumers away from their initial choice due to the high
4 cost. Thus, the HARDI believes the CEC needs to revise the
5 proposed standard.

6 The proposed updates would create a significant
7 statewide adverse economic impact on businesses and
8 residents. California Energy Commission initially
9 determined no significant statewide adverse economic impact
10 on businesses, including the ability of California to
11 compete with other states. HARDI disagrees with this
12 determination given the proposed changes directly increase
13 the expenses for those who wish to use natural gas for
14 their HVACR systems. The requirements are not necessary
15 for properly operating on natural gas water heater and add
16 unnecessary additional costs that make implementing a
17 natural gas water heater unobtainable for the average
18 citizen.

19 Thus, HARDI believes that the proposed regulation
20 would have significant statewide adverse impact economic
21 impact on the businesses and the CEC needs to revise it.
22 The proposed updates would preempt the EPCA, and due to the
23 recent Berkeley, California decision against *California v.*
24 *The Restaurant Association*.

25 I see that I'm out of time. So I'll just

1 conclude saying that HARDI and California share the goal of
2 moving forward consumers to a more environmentally friendly
3 technologies. However, we strongly disagree on the method
4 of achieving this goal.

5 Thank you.

6 MS. BADIE: Thank you.

7 Next, we're going to hear from Thomas Deary.

8 Thomas, I'm going to open your line. If you
9 could please spell your name for the record? We're asking
10 for comments to be two minutes or less.

11 MR. DEARY: Good afternoon. Can you hear me?

12 MS. BADIE: Yes.

13 MR. DEARY: Great. Thank you. My name is Thomas
14 Deary, that's T-H-O-M-A-S D-E-A-R-Y, and I'm the Director
15 of Codes for AHRI, the Air-Conditioning, Heating, and
16 Refrigeration Institute.

17 Good afternoon, Commissioners. As I said, my
18 name is Tom Deary, and AHRI is the internationally
19 recognized trade association representing more than 330
20 manufacturers of residential and commercial heating,
21 ventilation, and air-conditioning equipment, water heaters,
22 and commercial refrigeration equipment.

23 AHRI would like to recognize CEC staff and
24 consultants for all of their hard work and considerable
25 efforts in this Code cycle. While AHRI appreciates CEC

1 revisiting proposed changes for nonresidential buildings
2 with a second round of 15-day express terms, and certainly
3 agrees that this is an improvement, AHRI looks forward to
4 supporting CEC as staff continue to expand available HVAC
5 technology options for designers in the prescriptive path
6 for all buildings.

7 AHRI also remains concerned about the durability
8 of the Energy Code due to certain proposed revisions being
9 preempted by the Energy Policy and Conservation Act. And
10 additionally, we are concerned about the multiple -- excuse
11 me, we are concerned about the implementation of new
12 metrics used to cost-justify proposed measures and evaluate
13 Code compliance.

14 Thank you again to the hard-working and dedicated
15 CEC staff working on the Energy Code updates and for the
16 opportunity to comment here today. Thank you.

17 MS. BADIE: Thank you.

18 Next, we're going to hear from Renee Eddy.

19 Renee, I'm going to open your line. If you could
20 please spell your name for the record? We're asking for
21 comments to be two minutes or less. Renee, your line is
22 open. You'll have to unmute on your end.

23 MS. EDDY: Okay, I'm working on that.

24 MS. BADIE: We can hear you.

25 MS. EDDY: Okay. Thank you. So Renee Eddy,

1 R-E-N-E-E, Eddy, E-D-D-Y, Chief Innovation Officer at
2 Rinnai.

3 MS. BADIE: You may begin.

4 MS. EDDY: Rinnai expressed concerns about the
5 proposed changes to California's Energy Code that would
6 require new water heaters to be heat pumps. While heat
7 pumps are only one options, they are not the only efficient
8 choice. By mandating heat pumps, these changes would
9 eliminate all other options, including tankless water
10 heaters, which can be just as efficient depending on the
11 situation. This one-size-fits-all approach won't work for
12 everyone and could force Californians into solutions that
13 don't fit their needs or budgets.

14 Even more troubling is that the analysis used to
15 justify this requirement has some serious flaws. The
16 proposal doesn't consider the real costs that consumers
17 will face. As an example, heat pump water heaters can cost
18 30 to 50 percent more to install than tankless water
19 heaters. Plus, when their efficiency drops, especially
20 when they have to use electric heating elements in colder
21 weather or during high demand, they can end up costing more
22 to run than gas tankless systems. This could lead to
23 higher energy bills for many families.

24 But the most important concern is how this will
25 impact everyday Californians. This proposal doesn't just

1 limit choices, it removes them altogether by only allowing
2 one type of water heater. It takes away the ability for
3 homeowners and designers to choose the best option for
4 their specific needs, which could lead to unnecessary costs
5 and headaches.

6 Finally, it is important to note that these
7 proposed changes conflict with federal law, specifically
8 the Energy Policy and Conservation Act which prevents
9 states from setting their own rules on energy use for
10 certain products. This was confirmed in the *California*
11 *Restaurant Association v. City of Berkeley* case. If these
12 changes are challenged, they could be overturned, wasting
13 time and resources and causing confusion and delays for
14 Californians who just want reliable and affordable water
15 heating options.

16 I urge the CEC to consider a broader, more
17 flexible approach that includes a variety of energy
18 efficient options, like tankless water heaters, and to
19 reconsider these changes in light of federal guidelines.
20 Let's make sure we're truly helping Californians by
21 offering solutions that fit their diverse needs and keep
22 costs down. With our nation facing a housing affordability
23 crisis, owning a home is already a distant dream for many
24 Americans and Californians. We must avoid any requirements
25 that would push that dream even further out of reach by

1 increasing costs unnecessarily.

2 Thank you for your time and consideration.

3 MS. BADIE: Thank you.

4 Next, we're going to hear from David Moller.

5 David, I'm going to open your line. If you could please
6 spell your name for the record? We're asking for comments
7 to be two minutes or less.

8 MR. MOLLER: Hi. Can you hear me?

9 MS. BADIE: Yes.

10 MR. MOLLER: Great. Thank you. David Moller,
11 M-O-L-L-E-R. I'm with the Marin-Sonoma Building
12 Electrification Squad, which is part of Bay Area Climate
13 Reality.

14 We strongly support the proposed provisions of
15 the 2025 update to the California Energy Code, but we'd
16 like it to go further in two specific areas.

17 First, we'd like to see the update require that
18 air conditioners be replaced with heat pump space
19 conditioners on burnout. Clearly, this requirement would
20 need to have appropriate exceptions, but there's no reason
21 to delay implementation for the majority of cases where it
22 makes economic sense to proceed now.

23 Second, we'd like to see the update require that
24 all newly constructed buildings be all-electric. Now here
25 in Marin County, 6 of the 12 jurisdictions adopted all-

1 electric for newly constructed building Reach Codes, but
2 all six have repealed or suspended enforcement as a result
3 of the Ninth Circuit Court decision in *California*
4 *Restaurant Association v. City Berkeley*. Several of the
5 jurisdictions specifically declined to consider a successor
6 Reach Code that would meet EPCA requirements, saying they
7 would wait and see what the 2025 Energy Code would require.

8 The point is, local jurisdictions are stuck and
9 are looking to the CEC for action. If not part of the 2025
10 Energy Code update, please consider taking this up as an
11 interim action well in advance of the 2028 Energy Code
12 update.

13 Thank you so much.

14 MS. BADIE: Thank you.

15 Next, we're going to hear from an attendee
16 identified as CALSSA. I'm going to open your line. It
17 would be helpful for our record if you could -- oh, the
18 hand went away. If that CALSSA caller wanted to raise
19 their hand again -- oh, there we go. Sorry about that.
20 I'm going to open your line. It would help our record, if
21 you could identify your name and spell your name as well.
22 We're asking for comments to be two minutes or less.

23 MR. HEAVNER: Oh, great. Thank you. Sorry I
24 didn't have my name in there. This is Brad Heavner with
25 CALSSA, the California Solar and Storage Association. It's

1 B-R-A-D H-E-A-V-N-E-R. CALSSA is a trade association in
2 the state representing more than 700 different businesses
3 working in solar and storage here in California.

4 CALSSA strongly supports the updates to the
5 Building Efficiency Standard, really appreciate the of
6 Gypsy Achong and Javier Perez and their whole teams that
7 have worked on the solar and storage components of the
8 updates. I'm incredibly impressed by how diligent they
9 were and willing to go the extra mile to make sure they got
10 things right.

11 There were a few tricky issues that came up, most
12 notably on residential batteries and ensuring that they
13 cycle on a daily basis. Code gives significant credit to
14 builders for including batteries and they want to make sure
15 that those batteries are actually cycling on a daily basis.
16 In our view, the structure of the net billing tariff itself
17 is sufficient assurance that those batteries are going to
18 be cycling.

19 Staff wanted more than that, and we negotiated
20 something that we think is reasonable, and it's an
21 operating mode that defaults back to daily cycling if a
22 customer takes it out of that mode for storm preparation
23 purposes. So the battery aggregators are now set to create
24 a new battery operating mode specific for California Title
25 24. We have a lot of confidence that's going to work well.

1 On other issues, it was just a matter of working
2 out language that makes sense, especially as Mr. Raymer
3 said, in multi-meter properties, now that we don't have
4 meter aggregation for some of those customers and getting
5 it right to have a requirement that makes sense within that
6 context. Another example is the pool heating requirement
7 where customers have the option of solar or a heat pump or
8 both in a hybrid system. And just making sure the language
9 makes sense and the details of it was a matter of a lot of
10 meetings and just working with the language and getting it
11 straight.

12 We think the staff has done that, really
13 appreciate your work on this and the Commission as a whole
14 in maintaining a strong efficiency standard. We support
15 the updates.

16 Thanks very much.

17 MS. BADIE: Thank you.

18 Next, we're going to hear from Dana Fischer.

19 Dana, I'm going to open your line. If you could
20 please spell your name for the record? We're asking for
21 comments to be two minutes or less. Dana, I believe I lost
22 your raised hand. I'll come back if you want to raise it.

23 We're going to go to Lauren Weston.

24 Lauren, I'm going to open your line. If you
25 could please spell your name for the record? We're asking

1 for comments to be two minutes or less.

2 MS. WESTON: Hi, everyone. My name is Lauren
3 Weston, L-A-U-R-E-N W-E-S-T-O-N. I'm the Executive
4 Director of Acterra: Action for a Healthy Planet. We're a
5 climate change nonprofit that serves eight and sometimes
6 nine counties of the Bay Area, and that's countless
7 thousands of residents interested and supportive of
8 statewide and local electrification efforts.

9 I'm speaking today in support of expanded heat
10 pump baselines for residential and nonresidential new
11 construction and provisions that strongly encourage the
12 replacement of single-zone packaged rooftop units using
13 commercial buildings like schools and offices, which I
14 partake of because I have children and employees, with heat
15 pumps. This Code would be a win for air quality for our
16 families and communities as well as increased resilience
17 for our region.

18 And as a side note, I use heat pump technology in
19 my own home and have never looked back and I can't imagine
20 ever going back. So thank you for considering support of
21 this Code.

22 MS. BADIE: Thank you.

23 Next, we'll hear from Dana Fischer.

24 Dana, I'm going to open your line. Please spell
25 your name for the record. We're asking for comments to be

1 two minutes or less.

2 MR. FISCHER: Thank you. This is Dana Fisher,
3 D-A-N-A, Fischer, F-I-S-C-H-E-R. I'm representing
4 Mitsubishi Electric. I am, like many of the commenters,
5 grateful for the efforts of staff and the CEC Commission.
6 It's always a delight to work with them and be able to
7 communicate back real issues that we see in the Code
8 process. We strongly support adoption and are grateful for
9 all of the efforts to arriving at the current draft.

10 Mitsubishi has been providing cold climate heat
11 pumps and VRF systems to the United States and California,
12 with operation of these systems well below our guaranteed
13 capacity point of negative 13 degrees Fahrenheit for more
14 than 15 years. We are embracing the opportunity to work
15 closely with distributors, contractors and engineers and
16 the state to deliver upon the promises of decarbonization
17 in years ahead.

18 We know that there are questions and, you know,
19 some level of trepidation about moving forward with cold
20 climate heat pumps relative to more conventional
21 technologies. But we know that the elevated performance of
22 cold climate heat pumps delivers greater comfort and
23 provides lower operational costs for consumers, which is
24 incredibly important for low income and moderate income
25 households.

1 And so we thank you for the opportunity to speak
2 and provide our comments and are seeking to have support
3 for adoption of the Code. Thank you.

4 MS. BADIE: Thank you.

5 Next, we're going to hear from Bronte Payne.

6 I'm going to open your line, Bronte. Please
7 unmute on your end. Spell your name for the record. We're
8 asking for comments to be two minutes or less.

9 MS. PAYNE: Hi. Can you hear me?

10 MS. BADIE: Yes.

11 MS. PAYNE: Thank you so much for the opportunity
12 to comment. My name is Bronte Payne. I'm the Senior
13 Policy Director for New Homes at SunPower.

14 SunPower supports the adoption of the 2025
15 California Energy Codes. We really appreciate the work and
16 the collaboration from CEC staff on the 2025 Energy Code
17 and support the changes that have been put forward in the
18 proposed Code. We think that these changes continue
19 California's Energy Code leadership and believe that the
20 CEC staff effectively work with stakeholders to make
21 updates to this Code that will support with the
22 Commission's goals.

23 We think that the changes made to JA-12
24 compliance requirements, battery storage, are reasonable to
25 encourage battery cycling to support the grid while

1 providing benefits to home buyers.

2 As I mentioned, we encouraged the Commission to
3 adopt the 2025 Energy Code. And later this year in the ACM
4 Manual update, we're excited to work with CEC to model a
5 CFI-3 option that can help streamline compliance, reducing
6 the cost of complying with the Code to homebuilders.

7 Thank you again for the time to comment and a
8 really big thank you to the CEC staff for all of their work
9 in this Code.

10 MS. BADIE: Thank you.

11 Next, we're going to hear from Anne Pernick.

12 Anne, I'm going to open your line. Please spell
13 your name for the record. We're asking for comments to be
14 two minutes or less.

15 MS. PERNICK: Hi. My name is Anne Pernick,
16 A-N-N-E, last name is P-E-R-N-I-C-K, and I'm with Safe
17 Cities at Stand at Earth (phonetic). Thank you for the
18 opportunity to speak today. SAFE Cities works with local
19 government leaders and advocates on local and sometimes
20 statewide policies to phase out fossil fuels across the US
21 and Canada.

22 I want to thank the California Energy Commission
23 for this Code. There is a certain poetry to the local
24 energy efficiency ordinances from six different cities also
25 being on the consent agenda today. Individual communities

1 across California have been working toward clean and
2 healthy buildings for years and now the CEC is taking
3 efficient space and water heating statewide for new homes.
4 This new Code will save energy, lower emissions, and
5 decrease asthma and other risks in new residential
6 buildings and speed up the energy transition in some
7 existing commercial buildings.

8 The CEC, local government leaders, air districts,
9 concerned neighbors, other advocates are keeping up the
10 fight to transition our buildings to clean and safe energy.
11 Thank you for your leadership.

12 There was a significant missed opportunity,
13 though, that I want to address in that the 2025 Building
14 Code removed proposed language that would have encouraged
15 expired AC units to be replaced with heat pumps. Instead,
16 the Building Code includes language that can be adopted by
17 local governments to encourage heat pump adoption in
18 single-family homes when central air-conditioning units
19 need replacement.

20 While local adoption is an important step, and
21 again we are seeing the continued leadership of local
22 governments and advocates, California needs a strong
23 statewide policy to take advantage of this commonsense
24 opportunity to cut pollution by driving heat pump adoption
25 in existing homes. I hope we can count on this being

1 included in the Code at the next possible opportunity.

2 Thank you.

3 MS. BADIE: Thank you.

4 Next, we're going to hear from Blake.

5 Blake Herrschaft, I'm going to open your line.

6 If you could please spell your name for the record? We're
7 asking for comments to two minutes or less.

8
9 MR. HERRSCHAFT: Thank you. My name is Blake
10 Herrschaft, that's H-E-R-R-S-C-H-A-F-T. I work for
11 Peninsula Clean Energy as the Building Electrification
12 Programs Manager, and I've been a professional engineer
13 licensed in the state of California for over a decade. I'm
14 an experienced HVAC designer and I've worked with the
15 California Energy Code since 2006, both as a designer and
16 through policymaking.

17 Thank you so much for this update to the Code.
18 This is the most important update of the California Energy
19 Code I have seen by far, potentially the most important
20 move the California Energy Commission has ever done with
21 regards to decarbonization.

22 Peninsula Clean Energy strongly supports the
23 adoption of the amendments as proposed. We are especially
24 supportive of the single-family dual heat pump baseline,
25 the commercial new construction requirements, and

1 especially the existing building roof top package unit
2 replacement requirement, prescriptive requirement requiring
3 electrification of those units on replacement.

4 This Code will save more tons of CO2 than any
5 prior effort I've seen in my career and will save hundreds
6 and hundreds of staff hours on Reach Codes in the process.
7 I'm greatly appreciative of that. I've worked on 30 Reach
8 Codes in the region.

9 Also, I want to note on schools and VRFs, I have
10 designed schools with VRFs, so strongly support adding that
11 in. I really appreciate that change. I live at elevation
12 in Lake Tahoe. My wife works at a school which is heated
13 throughout the year by a heat pump. Also at the base of
14 Palisades, there is a school running on heat pumps year-
15 round. That's a place that gets 50 feet of snow per year,
16 so we have seen a lot of success with schools running on
17 heat pumps throughout the state, including at high
18 elevation.

19 Thank you so much, a special thank you to
20 Commissioner McAllister and all the Commissioners and the
21 entire team at the CEC that worked on this. Thank you.

22 MS. BADIE: Thank you.

23 Next, we're going to hear from Ted Tiffany.

24 Ted, I'm going to open your line. If you could
25 please spell your name for the record? We're asking for

1 comments to be two minutes or less.

2 MR. TIFFANY: Thank you, Commissioners. Ted
3 Tiffany, it's T-E-D T-I-F-F-A-N-Y, currently working for
4 the Building Decarbonization Coalition, but past
5 engineering firm and subject matter expert for Codes and
6 Standards.

7 Just want to really thank the Commissioners and
8 staff explicitly for their diligence in the last Code cycle
9 and really engaging on stakeholder feedback. And that
10 includes the deep evaluation of the EPCA adherence and
11 following the strict rules of cost-effectiveness in the
12 original Warren-Alquist Act. Every measure that is under
13 this new standards that I encourage you to adopt today has
14 followed each of those very diligent efforts for
15 maintaining lifecycle cost-effectiveness and compliance
16 with EPCA.

17 And I want to thank staff for especially their
18 engagement on the multi-zone heat pump applications,
19 expanding the line of allowed heat pumps in multi-zone
20 applications, and really engaging with deep cost analysis
21 on those systems. Take comfort, we've spoken to a lot of
22 the Bay Area engineering firms about the cost effectiveness
23 on that and the cost assumed there, and gotten feedback
24 within the last couple of days that still have not hit the
25 docket. But I think the comments from Norman S. Wright,

1 who services the majority of the engineering firms around
2 the Bay Area, about the accuracy and even underestimation
3 by CEC staff in that cost proposal proves that you do have
4 some cost-effective measures for multi-zone heat pump
5 applications.

6 And just to put a final point on that, these are
7 prescriptive requirements. There is no ban on using fossil
8 equipment. The performance approach and other applications
9 for compliance are clearly lined out and in direct
10 compliance with EPCA and the cost effectiveness
11 applications within the Warren-Alquist.

12 So again, Commissioners, thank you for your
13 staff's diligence and I know how many hours each of them
14 have spent here. So thank you for all the hard work and I
15 encourage you to pass it today.

16 MS. BADIE: Thank you.

17 Next, we're going to hear from Jeff Whitelaw.

18 Jeff, I'm going to open your line. Please spell
19 your name for the record. We're asking for comments to be
20 two minutes or less.

21 MR. WHITELAW: Can you hear me now?

22 MS. BADIE: Yes.

23 MR. WHITELAW: All right. My name is Jeff
24 Whitelaw, J-E-F-F W-H-I-T-E-L-A-W, with Daikin Comfort
25 Technologies. I'm speaking today in favor of adoption.

1 Daikin U.S. Corporation is a subsidiary of Daikin
2 Industries Limited, the world's largest air-conditioning
3 equipment manufacturer. And Daikin has submitted comments
4 to the docket and would like to reiterate our appreciation
5 and support of the recent changes to section 140.4 allowing
6 for use of VRF with DOAS under the prescriptive pathway for
7 schools and office buildings. The change made allow for
8 additional flexibility and choice of equipment selection
9 under this prescriptive pathway.

10 VRF is a variable capacity heat pump system which
11 aligns with California's goals to achieve decarbonization
12 electrification. The technology provides proven energy
13 efficiency and energy consumption reductions, lower peak
14 load demand, and improved comfort versus other applied
15 systems. Heat pumps and VRF use in cold climate regions
16 also expanding.

17 There are comments on the docket that VRF pricing
18 is higher than that estimated by the Commission. They can
19 review the Commission's cost analysis and believe they are
20 on the higher side of typical VRF systems with EOS.
21 However, those estimates can be inclusive not only of
22 current products with R-410A, but also A2L refrigerant-
23 based VRF systems.

24 At least two commenters to the docket have
25 provided overstated VRF pricing, estimating that

1 refrigerant piping would cost \$16.00 a square foot and
2 condensate piping as much as \$2,500 a zone. The NRDC
3 provided an estimate of \$5.13 per square foot for a project
4 inclusive of all labor, installation, and material costs.
5 This real-life example is significantly less than proposed
6 by other commenters, however, it is in line with the
7 Commission's estimation.

8 Again, we appreciate the hard work of the
9 Commission and support the cost estimates and inclusion of
10 VRF in the prescriptive pathway.

11 Thank you.

12 MS. BADIE: Thank you.

13 Next, we're going to hear from Chris Bradt.

14 I'm going to open your line, Chris, so if you
15 could please spell your name for the record? We're asking
16 for comments to be two minutes or less. Chris, your line
17 is open. You'll have to unmute on your end.

18 MR. BRADT: I saw the unmute button. Thank you.
19 Can you hear me?

20 MS. BADIE: Yes.

21 MR. BRADT: All right. Chris Bradt, C-H-R-I-S
22 B-R-A-D-T. I'm a Senior Business Development Manager at LG
23 Electronics, and I'm calling to support the adoption of the
24 2025 Code and thank the CEC team for its hard work over the
25 last several years pulling this together.

1 At LG Electronics, we're proud to offer one of
2 the largest portfolio of electrification products in the
3 U.S., and that includes our high-performing inverter heat
4 pumps for space conditioning and water heating. These
5 products are proven to deliver efficiency and comfort in
6 pretty much all California climate zones, echoing comments
7 from Mitsubishi in terms of the performance of our
8 equipment down to negative 13 degrees for space
9 conditioning.

10 We are excited about the potential of what this
11 equipment can do as California moves towards its heat pump
12 goals and are committed to supporting that not only with
13 our products but also with a robust network of our
14 distributors and contractors, as well as our team of LG
15 engineers, sales professionals, and educators to help
16 homeowners and the building professional community in
17 California have the best LG experience possible.

18 I want to thank everyone for the hard work over
19 the last couple years and thank people for taking time with
20 my comments today. Thank you very much.

21 MS. BADIE: Thank you.

22 Next, we're going to hear from Brian Selby.

23 Brian I'm going to open your line. Please spell
24 your name for the record. We're asking for comments to be
25 two minutes or less.

1 MR. SELBY: Hello. This is Brian Selby,
2 B-R-I-A-N S-E-L-B-Y. Today, I'm here representing the
3 California Association of Building Energy Consultants,
4 otherwise known as CABEC. As the current board president
5 and on behalf of our board and our members, we are fully in
6 support of adoption of the 2025 Energy Code.

7 Our members, who we are very proud of, represent
8 the frontline of compliance with Energy Codes in
9 California. Our members are energy consultants, modelers,
10 certified energy analysts who, on a day-to-day basis, work
11 with the Energy Code applying it, analyzing buildings for
12 compliance and providing documentation. We are very proud
13 of our industry and the ability and the opportunity to work
14 closely with the Energy Commission in developing these
15 standards.

16 We'd just like to thank the Commission for the
17 continued open door to hearing our feedback, our
18 constructive criticism in some cases about the Code and we
19 really appreciate that opportunity and that the ability to
20 speak.

21 We also thank the Commissioners for their
22 understanding of our industry and what we do on a day-to-
23 day basis, and we look forward to the implementation of the
24 2025 Code.

25 I'd like to take just a moment for some special

1 thanks to CEC staff, specifically Javier Perez for going
2 the extra mile engaging with our members as stakeholders in
3 the process of developing the Codes. Amie Brousseau for
4 the outreach with the ICC Committee meetings and being a
5 liaison between the industry and building departments and
6 the Commission. Tau (phonetic), Payam, Danny, Muhammad,
7 probably many others, too many to mention right now, but we
8 just want to say thank you for this opportunity and we look
9 forward to the implementation of the 2025 Energy Code.

10 Thank you.

11 MS. BADIE: Thank you.

12 Next, we're going to hear from Melissa Yu.

13 Melissa, I'm going to open your line. Please
14 spell your name for the record. We're asking for comments
15 to be two minutes or less.

16 MS. YU: Hi. My name is Melissa Yu,
17 M-E-L-I-S-S-A Y-U. I'm here representing the Sierra Club.

18 We appreciate all the work the CEC staff and the
19 Commissioners, particularly Commissioner McAllister, has
20 taken to get to this point of the rulemaking. We strongly
21 support adopting these regulations and in particular
22 support the prescriptive options for new residential and
23 commercial buildings.

24 We also strongly support the proposed
25 requirements that gas-fired single-zone rooftop cooling

1 units in existing buildings be replaced with heat pumps
2 when the equipment is changed out. While we would
3 discourage the Code-removed language that would have
4 supported replacement of air conditioners with heat pumps,
5 we are excited to continue to work with the CEC to get
6 local cities to adopt these rules.

7 Thank you for the opportunity to comment, and we
8 look forward to further collaboration.

9 MS. BADIE: Thank you.

10 Next, we're going to hear from Meg Waltner.

11 Meg, I'm going to open your line. Please spell
12 your name for the record. We're asking for comments to be
13 two minutes or less.

14 MS. WALTNER: Great. Meg Waltner, M-E-G
15 W-A-L-T-N-E-R, from Energy 350, speaking today on behalf of
16 the Natural Resources Defense Council.

17 NRDC strongly supports the adoption of the 2025
18 Building Code as proposed today. The Building Code is a
19 critical tool for decarbonizing buildings throughout the
20 state and helping achieve California's climate and air
21 quality objectives, and the 2025 Code as proposed will
22 continue to help advance these objectives.

23 In particular, we support several measures. We
24 support the expanded heat pump baselines for space and
25 water heating in new homes, which are cost-effective and

1 will encourage but not require building electrification
2 since they will continue to provide the builder's fuel
3 choice options under the performance path.

4 We also strongly support the expanded heat pump
5 baselines for multi-zone systems and new medium-sized
6 school and office buildings.

7 The CEC staff have worked diligently to address
8 stakeholder feedback on this measure and have come to a
9 proposal that provides multiple compliance pathways, both
10 through the prescriptive and performance paths, and is
11 supported by the CEC's update analysis. And we support
12 that analysis. As mentioned by a previous commenter and as
13 we've submitted to the docket, that cost analysis for VRF
14 system aligns with cost data for projects that we have
15 worked on installing VRF systems.

16 Third, we strongly support the measure that will
17 encourage the replacement of rooftop HVAC equipment on
18 existing nonresidential buildings to be heat pumps at the
19 time of burnout. This measure provides flexibility while
20 encouraging heat pump adoption at this important
21 opportunity for replacement.

22 Finally, we support the many additional energy
23 efficiency and electrification-ready measures added to the
24 Code that have been supported by the CEC and Case Team
25 analyses throughout this process.

1 While we support the Code in all of these
2 measures, we do note that there was a missed opportunity
3 for this Code cycle in the removal of the residential AC to
4 heat pump replacement provision that's been moved into the
5 CALGreen Code. We hope to see further work on this measure
6 in the 2028 Code cycle.

7 So in summary, we strongly support the Code as
8 proposed. We thank the Energy Commission staff for their
9 hard work in finalizing it and urge adoption today.

10 Thank you very much.

11 MS. BADIE: Thank you.

12 Next, we'll hear from Gina Griffiths Rodda.

13 Gina, I'm going to open your line. Please spell
14 your name for the record. We're asking for comments to be
15 two minutes or less.

16 MS. GRIFFITHS RODDA: Hello. This is Gina
17 Griffiths-Rodda, G-I-N-A G-R-I-F-F-I-T-H-S R-O-D-D-A, and
18 I'm also in support of this particular Code.

19 I got to tell you, I was someone who very much
20 appreciated the hard work taken to support the cost-
21 effectiveness of the Energy Code when it came to change-
22 outs for commercial HVAC systems. So I appreciate that
23 that was upheld with this particular Code cycle. And I
24 know the hard work is actually in front of us once you guys
25 adopt the hard work to develop the software which needs to

1 support the performance approach appropriately to provide
2 people flexibility, the forms, the manuals, the money
3 things the industry needs to actually understand how to
4 apply this Code and really be thinking about how to best
5 serve enforcement so that we can really realize the savings
6 that we're promising.

7 Thank you.

8 MS. BADIE: Thank you.

9 I'd like to do one last call for any commenters
10 for item seven in the room or on Zoom.

11 All right, we don't have any more raised hands,
12 so back to you, Vice Chair.

13 VICE CHAIR GUNDA: Thank you. And I just want to
14 acknowledge all the commentators for taking the time to
15 provide your comments and everybody who has been engaged in
16 the process to really reflect a thoughtful, thorough
17 process as we develop the Code.

18 So I have a couple of questions for staff before
19 I open it up for comments from the Commissioners.

20 Michael, can I just ask you, there was a couple
21 of legal implications that were stated in the comments,
22 could you just comment on them? Thank you.

23 MR. MURZA: Yes, thank you. Good afternoon, Vice
24 Chair and Commissioners. I'm Michael Murza, Senior
25 Attorney in the Chief Counsel's Office, and so I'd like to

1 respond at a high level to some of the comments we've heard
2 today regarding the interaction between federal law and the
3 proposed revisions to the 2025 Energy Code.

4 For the recent case *CRA v. Berkeley* mentioned a
5 few times, so I just wanted to clarify that we have
6 reviewed the self-described limited and narrow holding of
7 *CRA v. Berkeley* and determined that the Ninth Circuit
8 Panel's conclusions do not extend to regulations contained
9 in a Building Code read together as a whole that meets
10 EPCA's seven-part Building Code exception.

11 To that end, the Energy Code has been carefully
12 and thoughtfully designed to meet each of the seven parts
13 of the Building Code exception to preemption. And while
14 states are not required to demonstrate compliance with each
15 of these seven parts in their rulemaking records, the
16 Energy Code rulemaking record contains information and data
17 throughout that confirms compliance with each of these
18 federal criteria.

19 Therefore, the CEC's Chief Counsel's Office has
20 reviewed the commenter's concerns in depth and concludes
21 that the comments misapply the law regarding EPCA
22 preemption, that the Energy Code is consistent with the
23 Washington line of cases, which continues to be the Ninth
24 Circuit's leading case on EPCA's seven-part Building Code
25 exception to preemption, and finally, that the California

1 Energy Code is not preempted because it satisfies EPCA's
2 seven-part Building Code exception for regulations
3 contained in a state Building Code for new construction,
4 which includes new buildings and new construction as part
5 of additions and alterations to existing buildings.

6 Thank you.

7 VICE CHAIR GUNDA: Thank you, Michael. Much
8 appreciated.

9 I have a quick question for Gypsy. Just on the,
10 and as I'm thinking through the Code, thank you for the
11 briefing, by the way, and just on the compliance pathways,
12 could you just comment on different compliance pathways,
13 particularly on the nonresidential portion?

14 MS. ACHONG: Sure. The Code has two compliance
15 pathways. One I describe as the grocery list pathway. So
16 we have sort of a grocery list of requirements and if you
17 check off all of the requirements that are eligible to your
18 building type or your climate zone, then you comply.

19 The second compliance path is what we call the
20 performance path, where you design a -- you model a
21 building that is reflective of the building that you plan
22 to build and then we compare the energy use of that
23 building to a standard design building in that same climate
24 zone and for that same occupancy type. If the energy
25 budget of your designed building is less than the energy

1 budget of the standard design, then you comply.

2 VICE CHAIR GUNDA: Gypsy and Mike, thank you so
3 much for the clarifications.

4 With that, I'll pass it to Commissioner
5 McAllister to start up the comments.

6 COMMISSIONER MCALLISTER: Great. Well, I think
7 from the number of comments, you know, that makes it even
8 more clear how important this is to California and to all
9 the stakeholders involved and really to every resident of
10 the state, and actually far beyond the state.

11 This is an activity that is part of the CEC's
12 bread and butter, part of its initial constitution in the
13 Warrant-Alquist Act and one of our fundamental
14 responsibilities that we've been doing since then. And it
15 really does set up sort of a North Star for many
16 jurisdictions, both smaller, you know, local jurisdictions
17 in the state and also other states that really look at what
18 we do.

19 And it also, it plays a really important function
20 to move markets for technologies that are commercial ready
21 but need scale-up as part of our energy efficiency
22 pursuits, and then have, by extension, all sorts of other
23 positive impacts such as indoor air quality, as you've
24 heard, such as emissions reductions, really aligns well
25 with our long-term climate goals.

1 I want to acknowledge a few people. I know that
2 there've been a number of occasions to do that already, but
3 I just, I have to. You know, we've heard a lot of
4 gratitude to the staff and all the comments, and thank you
5 for all those comments, but I want to just call out a few
6 people.

7 You know, the Building Standards Branch
8 management, you know, great job, Gypsy, on the
9 presentation, but there actually behind the podium there,
10 but really got -- you know, came in and got sort of thrown
11 headfirst into this activity and just embraced the
12 challenge and really, just you've shown great leadership
13 throughout this whole process and just really rolling up
14 your sleeves and working directly with stakeholders and
15 bringing in staff and really ensuring that the right
16 analyses got done and that those results are always shared
17 properly with all the knowledgeable folks. And we have
18 incredible and knowledgeable community across the state.
19 So really, just thanks for all of your incredibly,
20 incredibly hard work on that.

21 And then Will Vicent, also, Deputy Director of
22 the Efficiency Division, who also, I think, you know, you
23 can no longer -- there you are -- no longer can qualify
24 yourself as a newbie here at the Commission. So I think
25 you've been through a couple of these cycles now, and this

1 one entirely. I just really appreciate your leadership as
2 well and the network that you bring to this and experience
3 with most of the stakeholders across the state.

4 And I see Mike, you're sort of have, I think,
5 played sort of a (indiscernible) role a little bit and just
6 sort of trying to -- or whack-a-mole maybe, just sort of
7 taking every issue as it came up and really making sure
8 that we all work together on it. So I appreciate that.

9 And I really have to acknowledge Javier Perez,
10 who is the Project Manager of the Building Standards, who
11 just has been everywhere, you know, all at once and just
12 really running herd on every issue that comes up, just
13 technical competence. His manner of just interacting with
14 people with respect and kindness, just really sets a tone
15 for the whole activity that has been amazing to watch and
16 to just see in action. So a lot of progress happens just
17 because people work as a team.

18 And Javier, I don't know if you're in the room,
19 actually. Is he now? Oh, okay, you're listening in.

20 Well, Javier, so I will mention, Javier has a
21 brand new baby. So this is your -- I guess you get twins,
22 I'm not sure, with this Code package as well, but really
23 just appreciate you tremendously. You stepped up to the
24 plate and this can't have been easy juggling all that
25 you're juggling, so incredible job.

1 And then a few others. You know, Mikey
2 Shewmaker, just thank you. I saw you. There you go. The
3 alternate Program Manager for this, the Project Manager and
4 the lead for Part 11, which we'll hear next.

5 And Payam Bozorgchami, overall technical lead for
6 the update, who is just so embedded in this community and
7 knows everybody and is so technically competent. So really
8 helping on many issues as they came up, just really running
9 sort of the linebacker role.

10 Bach Tsan, who's our HVAC technical whiz, who has
11 done amazing work on that front. And as you've all heard,
12 we had a lot of issues come up, like sort of a lot of
13 stakeholders informing the HVAC solutions that are in the
14 Code. And so that was just a lot of work with
15 stakeholders, so I really appreciate that.

16 And I think we landed in a great place with on
17 both res and non-res to create, you know, kind of a
18 muscular baseline, but also create flexibility and keep
19 open all the pathways we have to keep open, and then set up
20 a structure so that we can actually approve new pathways as
21 they come up and those technical options emerge. And so I
22 really think that that's a really wise approach that has
23 emerged from this whole effort and is going to serve the
24 state well, not just in this Code, but far ahead.

25 And I will note, Bach is leaving, unfortunately,

1 the CEC at the end of this week. And so just really want
2 to thank him for all the hard work. I know, you know,
3 Bach, you'll still be in the ecosystem here in the state,
4 so we're going to still call on you. We're going to find
5 your number and track you down, but in your new role, good
6 luck with that. We really just appreciate you all the
7 success.

8 Mike Murza, thank you, just really making sure we
9 had all our I's dotted and T's crossed all on the way. And
10 the provisions are specific and clear, and I think just
11 having that in-house expertise to provide a really
12 sophisticated read on not just sort of the face value of
13 them but also the historical context, and just really
14 keeping us complying with federal law is obviously super
15 important, so I think it's going to serve us well going
16 forward.

17 And then last but not least, I want to
18 acknowledge Bill Pennington here, the institutional memory
19 of the Building Code. He has been involved in every update
20 except for the first one, maybe, I think, it's probably
21 right, yeah. But having that sort of singular brain trust
22 that's in your head, Bill, was just invaluable, and always
23 invaluable. So thanks for, you know, chiming in with a
24 comprehensive knowledge about much of the context behind
25 each issue as it came up.

1 So, you know, it really does take a village.
2 Those are the ones I -- those are the folks I want to
3 acknowledge directly, but the team is much, much bigger
4 than that. And you've heard most, if not all the names
5 that have been involved. I see Mazi in the audience there,
6 so thanks for pitching in in your spare time. And really,
7 we have some of the world's, I'd say, most accomplished
8 experts in this field at the Commission and many out there
9 in the community that have brought their, you know, best
10 efforts to this conversation.

11 Again, I'll say, I say this every time, there's a
12 big complicated rulemaking that we're concluding, but the
13 process is fundamentally important to getting to good
14 outcomes. And the process, I'm super proud of the process
15 that we run here at the Commission, and just acknowledging
16 the Executive Office and Chief Counsel's Office, and all
17 the staff involved to make sure that we are listening, that
18 we, you know, when we have a question or wondering what the
19 world thinks about something that we can, you know, open
20 our doors and, you know, make the right phone calls and do
21 a convening and work through it in an honest and very
22 transparent and good faith way.

23 And that all goes on the record. And so we have
24 a really solid record to look back on that is just the best
25 foundation we can possibly have. And that includes just

1 the community that helps that happen. You've heard from
2 many of them today. The stakeholders that have chimed in,
3 I want to just acknowledge Kelly and the Case Teams. A lot
4 of great work. And that's a funnel that sort of, you know,
5 we start with a point of contact, but it goes out and
6 really brings in a lot of people with specific expertise
7 across the state and beyond.

8 The OEMs, you've heard from some of them today.
9 They are incredibly knowledgeable, obviously. It's their
10 trade, it's their business. They know what they're talking
11 about and they bring a lot of specifics that we need to get
12 to the right place.

13 The HERS community, CABEC, thank you for chiming
14 in. The building officials, you know, CALBO is an
15 important constituent and the CSLB. We have a bunch of
16 other agencies that are also paying attention that we ping
17 every now and then on the issues as they present. So
18 really innumerable stakeholders across the state. And so
19 the Building Energy Efficiency Standards, the development,
20 has a really clear process and we have followed that to the
21 letter.

22 And I want to just mention again, all the co-
23 benefits. You know, we focus on energy efficiency, you
24 know, energy impacts and cost impacts, cost effectiveness.
25 There are all sorts of co-benefits that come along with the

1 Building Code. So, you know, indoor air quality, I think
2 we need to do a better job of sort of unpacking the health
3 benefits of what we're doing and sort of helping that
4 sector come to the table or building a new table to work
5 with them to unlock maybe some resources from the
6 healthcare sector. I think it really does matter and it
7 improves public health and innumerable other.

8 We also have a housing challenge in the state.
9 And I think the Building Code and the energy agencies and
10 the housing agencies are working very closely together
11 increasingly as a matter of policy now from the governor to
12 make sure that we manage housing policy and energy policy
13 sort of together in lockstep. And I firmly believe that
14 the kinds of benefits we're talking about, realizing
15 through the Energy Code, will also help us build more
16 housing and build healthier housing and unlock a lot of
17 benefits across the state.

18 So big challenge, decades ahead to get to these,
19 you know, final solutions that can really solve these
20 problems and get to that point B that we really want to get
21 to collectively. But I think this is a contribution to
22 that.

23 And then finally, I want to talk a little bit
24 about implementation. So, you know, Gina Griffiths Rodda,
25 thank you very much. As you read off the list of what the

1 work ahead looks like, I started to sort of need a nap.
2 But the implementation is critical. The details really
3 matter. This is a wonderful platform. It's a really good
4 sort of setup to then begin the next stage, which is
5 building ACM and CABEC updates and everything else that's
6 going to go into the Code. But we need all the
7 stakeholders on that too along the way.

8 And so I know that staff is going to be reaching
9 out and we're going to be doing our best job to get moving
10 expeditiously forward on building out the implementation
11 tools. And the goal is to give the industry and, you know,
12 the buildings' ecosystem, everybody, all the stakeholders a
13 year, a solid year to know what the result is and get ready
14 for the implementation. And so, they've put the date being
15 January 1st, 2026.

16 So I'm really looking forward to sending this
17 over to the Building Code if we pass it, if we adopt it
18 today -- I'm sorry, sending it over to the Building
19 Standards Commission if we adopt today. Again, we're the
20 adopting agency for Part 6 and the energy part of Part 11,
21 which is our next item that we'll hear. And the Building
22 Standards Commission rolls that up into the whole Building
23 Code package, and they will work through that package in
24 December towards the end of the year. And once they
25 approve the whole package, then the clock starts so it's

1 formally, you know, part of state policy and law and we're
2 off to the races.

3 So, you know, we can always do better. There's
4 no perfect solution to the challenges that we face in the
5 energy sector, or really any other sector. These are
6 complex issues and, you know, there are lots of legitimate
7 opinions that on any given tough issue that, you know,
8 maybe they can't all be true but they maybe can all be
9 partially true. And actually, many of them can be true but
10 they don't have to be the same.

11 And so it's really a hard job to land in a place
12 that's sort of viable and feasible. And I think the
13 comments have really reflected that we've done that
14 successfully. You know, not everybody's fully happy, but I
15 think they acknowledge the complexity of the issues and can
16 appreciate the outcome.

17 So I really appreciate that thoughtfulness that
18 all the stakeholders, both the commenters today and just
19 the innumerable stakeholders who've been part of the
20 process along the way, I really appreciate all of their
21 thoughtfulness and just professionalism and just the
22 respect that they show for our staff, for each other, for
23 the process and agency, the state.

24 I just think we have -- I always step back and
25 people are like, you've been doing this job a long time.

1 And it's because I get to work with wonderful people. And
2 I think many of our staff, I know they feel the same way.
3 You know, it's why the Energy Commission is such a great
4 place to work. And we heard some of that earlier, I mean,
5 I think.

6 So, you know, this really does set a standard for
7 how we approach our built environment and how we
8 collectively row in the same direction and get where we
9 need to go. And so I'm just very, very grateful for the
10 opportunity to work with all staff and just in the creation
11 of something really special. So thanks very much.

12 VICE CHAIR GUNDA: Thank you, Commissioner
13 McAllister.

14 We'll go to Commissioner Gallardo.

15 COMMISSIONER GALLARDO: Thank you. I appreciate
16 that.

17 I also want to emphasize how much interest there
18 is in this area and how important the Building Code is,
19 especially about, you know, getting to healthier homes for
20 everyone. I think that's really important.

21 I did have a couple of questions, Gypsy, if
22 you're willing to come back? So first, great presentation.
23 Thank you so much for that. It was very thorough, which,
24 you know, is helpful to us as we're trying to navigate this
25 area that has a lot of nuance. And then also thank you for

1 representing your division. You did an excellent job.

2 And my question is, you know, we had several
3 comments today, about two dozen or so, and I saw in the
4 presentation that there were several periods of public
5 comment. I was just curious, were those the required
6 number of periods or did you do additional public comment
7 periods or, you know, was there a request for those? I'm
8 just curious if you could talk a little bit more about
9 that.

10 MS. ACHONG: Typically, we always have a 45-day
11 period. It's when we release our kind of first proposal.
12 But then we always get a lot of feedback that requires what
13 Michael Murza would call substantive change. So then we
14 release a second proposal for 15-day comment period.

15 In this case, we got comments back that were so
16 substantial that we felt like we had to go for a second 15-
17 day comment period, which is the comment period that just
18 ended back in September 6th.

19 We also always have a lead Commissioner hearing,
20 and Commissioner McAllister sits for three days, usually,
21 and hears all of the feedback that different stakeholders
22 have during our 45-day comment period.

23 COMMISSIONER GALLARDO: Okay, thank you for that.
24 I appreciate how much staff is involved and engages all the
25 various participants who have interest.

1 My other question is around the consumer
2 protection that you mentioned. It sounded like there was
3 reinforcement of that, which I think is really important.
4 Could you speak a little bit more about what that looks
5 like?

6 MS. ACHONG: Yeah. You know, I always say, rules
7 are only as good as the enforcement behind them; right?
8 And so we have these tremendous subject matter experts that
9 know how things should be built and so that they perform
10 well, and we're always striving to make that better. And
11 so the standards compliance branch of our Division is
12 tasked with trying to do the best we can to make sure that
13 the systems that are installed are installed correctly, and
14 that they deliver the benefits that we expect them to
15 deliver.

16 And as part of that, we partner with different
17 organizations on the residential side. We have the what
18 used to be the Home Energy Rating System Program, now the
19 Energy Code Compliance Program. On the nonresidential
20 side, we have the ATTCP Program. And so these are experts
21 who go out and make sure that equipment is installed
22 correctly so that it will perform correctly, so that the
23 efficiency that is seen in the field is what we would model
24 in our models.

25 COMMISSIONER GALLARDO: Excellent. Thank you. I

1 appreciate that additional detail. Thank you.

2 VICE CHAIR GUNDA: Thank you, Commissioner.

3 Commissioner McAllister?

4 COMMISSIONER MCALLISTER: I've already talked too
5 much, but I have a couple things I wanted to continue to
6 say.

7 So I did want to, just on the issue of heat
8 pumps, you know, heat pumps are a key strategy for us to
9 meet our climate goals. We have a 6 million heat pump
10 goal. And I want to just call out the builders for being
11 really flexible along the way and being a great participant
12 in this to understand, to get to know sort of what that
13 means for them and really, you know, work with us on those
14 prescriptive -- the prescriptive pathway.

15 And then, you know, we work really hard to
16 provide flexibility to the builders so that they can still
17 build the buildings that they think their customers want,
18 that the home buyer wants, but also, you know, really push
19 the envelope in terms of efficiency and performing
20 buildings.

21 And so that's just a really -- I think I wanted
22 to call out the sort of the building trades and the
23 builders, CBIA, and appreciate, Bob, you're being here as
24 partners and helping figure out what are really quite
25 complex, you know, market dynamics and just to preserve

1 buildability; right? Which is all of our goal.

2 And then I wanted to add to what Gypsy just said
3 about the process, because there's a huge long pre-
4 rulemaking process too. So the 45-day language doesn't
5 just sort of appear; right? It's the result of a huge
6 amount of activity with, you know, stakeholders that's less
7 formal before the rulemaking itself starts, but that really
8 does form the basis for the initial discussions once the
9 rulemaking has started in the 45-day language. And so
10 there's just a lot of fine -- a lot of building and then
11 tuning and then fine tuning that goes on through the
12 process.

13 And then it didn't come up too much, but I wanted
14 to also point out that on the multi-zone nonresidential,
15 sort of the most detailed part of the discussion here and
16 the main driver behind the second 15-day language, one of
17 the, I think, innovations or one of the ways -- so there's
18 a lot of innovation happening in these larger complex HVAC
19 systems.

20 There are lots of different technologies at play.
21 There are firms that specialize in one or the other. There
22 are, you know, different buildings, building types and, you
23 know, zonal configurations and all this kind of stuff. And
24 optimizing efficiency in that context is actually quite
25 challenging. And I'm looking at our engineers and they're

1 like, they could probably say it much better than I'm
2 saying. But there, and then also in the context of the
3 coming, really we're in the middle of the refrigerant
4 transition, right, to low GWP refrigerants. And so there's
5 just a lot of moving parts to the more complex HVAC
6 systems.

7 And so I think the way we've landed here with VRF
8 as the baseline, as you heard, that's an established
9 technology and, you know, very common system configuration.
10 But then also opening and keeping the door open to
11 different configurations, some of which we can already
12 model, many of which already are modelable along the
13 performance path, so you can actually model alternative
14 configurations and use them for compliance if you go the
15 performance path.

16 But we also kept the door open for new pathways,
17 new system configurations and technologies that can be
18 brought to the Executive Office, brought to the Executive
19 Director for approval and incorporation in the future along
20 the way. They don't have to wait for another update, you
21 know, three years from now.

22 So all told, that sort of construction of the
23 Code, I think, again, it's this collective wisdom that
24 comes out of all these discussions that no one person can
25 own, but that really does emerge with dialogue and hard

1 work. So I wanted to just mention that as sort of
2 something that I think the team should be particularly
3 proud of.

4 And then the last thing I want to say is
5 enforcement, we always need to find better ways to do
6 enforcement. It actually, you know, it costs money to have
7 people out there, you know, builders, you know, the
8 building department inspecting, they -- you know, that
9 costs money. The ATTCPs and the ECC Program now, renamed
10 it, not HERS anymore, but the compliance activity, you
11 know, is real people on the ground taking measurements,
12 looking at systems, evaluating their performance.

13 And so we really need to, I think, help sort of
14 connect the dots there because, you know, we have a huge
15 state, lots of local jurisdictions, building departments
16 have a lot going on. And so I think we have active
17 dialogues with the compliance community, both in res and
18 non-res, and over the coming, you know, couple of years, I
19 think we're really going to see a different playing field
20 there As we invest in it. We get some -- need some federal
21 money to help sort of facilitate those conversations and do
22 some technical work. So the team is really working hard to
23 find a path to focus more on compliance and put the CEC in
24 a more proactive role and not just kind of leave it all to
25 the building departments, but really build partnerships.

1 So again, this is how the Building Code moves
2 forward in the world. And, you know, it's a human endeavor
3 and so we really have to keep the dialogue going at all
4 times.

5 So I really appreciate, again, Gypsy, you and the
6 team.

7 VICE CHAIR GUNDA: Thank you, Commissioner
8 McAllister.

9 Going to Commissioner -- Chair Hochschild on
10 Zoom.

11 Chair?

12 CHAIR HOCHSCHILD: Yeah. Good afternoon,
13 everybody. Well, first of all, let me say, I'm sorry not
14 to be there in person. I'm alone here in a hotel room in
15 Washington, D.C., but would much rather be with you guys on
16 the dais (indiscernible). I'm here today with a delegation
17 of other California agency leaders lobbying the White
18 House, Senate and House, Department of Energy for more
19 resources for clean energy communities.

20 I want to begin with a big thanks to Commissioner
21 McAllister for really heading up our building
22 decarbonization efforts and efficiency efforts for many
23 years leading to this cone, which I think is a huge step
24 forward for the state, and thanks as well to Mike Sokol,
25 Will Vicent, Gypsy Achong, Bryan Early, my terrific Chief

1 of Staff, Kat Robinson, Ken Roger (phonetic), Mike Murza,
2 the whole legal team, and everyone else who contributed to
3 this.

4 I just want to observe that, you know, we rank
5 number one in the United States, according to the American
6 Council for the Energy Efficient Economy, on energy
7 efficiency. And that is really our first priority is to
8 reduce waste. Before we get to getting to a clean grid,
9 the first thing is to be efficient. It saves money. It
10 reduces pollution. It gives us a better state. And so I
11 see this as another milestone on the journey that we're all
12 on together to 100 percent clean energy future.

13 This Code is going to save \$4.8 billion, reduce
14 4.1 million metric tons of carbon dioxide, and give us over
15 half a million heat pumps in the next three years, a big
16 step forward.

17 And I just want to observe, as well, that I've
18 been on the Energy Commission now 11 years, every single
19 Energy Code we've adopted, which we do every three years,
20 you know, there's always some opposition from some parties.
21 It's not possible to have 100 percent consensus. But
22 there's never been a Code that we've adopted that we
23 regret. And, you know, you don't look back at what we did
24 with lighting and say, I wish, you know, we hadn't done
25 that, you know, with LEDs, or double pane windows, or, you

1 know, high efficiency building envelope, and all the rest
2 that we've done. These are all steps that are very well
3 vetted, and that's because our process is really thorough
4 and really inclusive. And it takes a lot of time and a lot
5 of hard work, but I really believe in our process, and I
6 think this is a great outcome.

7 So I just really wanted to lift up the whole team
8 and all the stakeholders who participated and shared your
9 comments. I think we get a better Code because of that.
10 And I just want to offer my full-throated endorsement for
11 this. I think it's a big step forward for the state, for
12 our efforts to advance clean energy and climate solutions
13 and save customers money, and so I'm in full support. And
14 my gratitude, again, to the whole team.

15 Back to you, Vice Chair.

16 VICE CHAIR GUNDA: Thank you, Chair. I have a
17 few comments before we take the vote.

18 Again, just wanted to say thanks to Commissioner
19 McAllister for his leadership. You know, going back, you
20 know, as a grad student, as somebody who was researching
21 buildings prior to joining the Energy Commission, watching
22 your leadership from afar always felt like, you know, you
23 summarize the process. I think given how difficult some of
24 these rulemakings can be, the thing that we rely on
25 foundationally is the ability to have a process that brings

1 all voices together so we can move forward as quickly as we
2 can. So just, Commissioner McAllister, thank you for your
3 leadership, as always.

4 I want to give a quick shout out to Bill
5 Pennington, who's here, and dives into this day in, day
6 out. At least for me, in briefings, provides a lot of
7 calm, as Bill kind of sets the stage on some of the
8 answers. And, you know, your office, to Bryan Early as
9 well. Incredible leadership from Bryan.

10 I also want to thank Chad Hochschild. I know
11 it's like really important for him, the standards, you
12 know, his full endorsement, and Ken Rider in his office,
13 and other staff who support in this office as well. So
14 thanks to the Chair and gratitude to him.

15 And Drew Bohan and Jennifer Martin-Gallardo from
16 the Executive Office who have a lot of work behind the
17 scenes that's not visible on this important interdivisional
18 work. So, Drew, thank you so much for your work.

19 Michael, thank you for the legal analysis.
20 Really appreciate it, both in the briefing and today, to be
21 able to like really understand the legal implications as we
22 move forward on this.

23 You know, Mike Sokol, Bill Vicent and the entire
24 Assessments Division, really thank you for your tremendous
25 leadership.

1 And all the stakeholders, I think, who -- you
2 know, while we can set the table, it requires a lot of time
3 on stakeholders front. And not knowing where the Code
4 lands and being there fully and negotiating the importance
5 of the trade-offs I think is an important process, so
6 really grateful to all the stakeholders who take the time
7 to come in together on these important issues.

8 I think in closing, you know, the climate
9 emergency is something we all share. I think there is
10 nothing, you know, kind of unsure about that. You know,
11 the climate is changing very fast and there is an absolute
12 need for us to act as quickly as we can. And during these
13 rulemaking processes, it's about how do you match the
14 ambition with the needs and the pragmatism and how do you
15 manage the transition? And the only way you can do that
16 well is through the process to ensure maximizing those
17 benefits.

18 So I personally feel very comfortable moving
19 forward, especially given the flexibility around compliance
20 that has been laid out. I think that was key for me to
21 just understand, you know, how we are keeping open to both
22 other pathways, but also future options with the executive
23 director's leadership. So overall, I'm really thankful to
24 all of our colleagues here at CEC, but, you know, at large
25 in California and elsewhere who participate in our

1 important rulemakings and move us collectively forward.

2 With that, Commissioner McAllister, can I ask you
3 if you are willing to move the item?

4 COMMISSIONER MCALLISTER: Okay. I have something
5 specific that I want to say, I will be happy to do that,
6 but you heard Gypsy talk about sort of the details, of the
7 errata and the like.

8 So I want to move item seven and explicitly
9 mention the errata, incorporation of the errata that was
10 read into the record by staff. So if we could go back and
11 look at that for the final resolution? Great. Okay.
12 Terrific.

13 So, Chief Counsel, that seems to work?

14 MS. DECARLO: Yes. Yes, thank you.

15 VICE CHAIR GUNDA: Chair, would you be willing to
16 second?

17 CHAIR HOCHSCHILD: Yes, I second the motion.

18 VICE CHAIR GUNDA: Okay, we're ready to take the
19 vote on this.

20 Commissioner McAllister?

21 COMMISSIONER MCALLISTER: Aye.

22 VICE CHAIR GUNDA: Chair?

23 CHAIR HOCHSCHILD: Aye.

24 VICE CHAIR GUNDA: Commissioner Gallardo?

25 COMMISSIONER GALLARDO: Aye.

1 VICE CHAIR GUNDA: Thank you. My vote is aye as
2 well. The item moves four-zero. Thank you so much.

3 Let's move to item eight. Thank you.

4 MR. SHEWMAKER: Well, it's a big act to follow,
5 but I'll try to do my best. All right, good afternoon,
6 Chair, Vice Chair, and Commissioners. My name is Michael
7 Shewmaker, and I'm the Supervisor of the Building Standards
8 Development Unit within the Efficiency Division. And I am
9 here today to provide an overview of staff's proposed
10 amendments to the Green Building Standards Code, otherwise
11 known as CALGreen, and to recommend that the Energy
12 Commission adopt the proposed amendments, as well as
13 staff's determination that this action is exempt from CEQA.

14 Next slide, please.

15 As a follow-on to the last presentation, the same
16 language in the Warren-Alquist Act that gives the Energy
17 Commission authority to update and maintain the state's
18 mandatory Building Energy Efficiency Standards, also known
19 as the Energy Code, provides the CEC with the authority to
20 update the state's voluntary Building Energy Efficiency
21 Standards within CALGreen. And within CALGreen, the CEC is
22 considered an adopting agency. However, this authority is
23 limited to just two specific sections, Appendix A4.2 and
24 Appendix A5.2, the Voluntary Energy Efficiency sections for
25 residential and nonresidential buildings.

1 Next slide, please.

2 So why is this important? What benefits does
3 this provide to Californians? Well, these voluntary
4 measures serve as a ready-made template for local
5 jurisdictions to adopt outright or to use as a basis for
6 their own local energy standards. And while it's important
7 to note that local jurisdictions are not obligated to use
8 this model language, jurisdictions developing their own
9 locally adopted energy standards often use at least some
10 part of the CALGreen voluntary provisions as a template for
11 their local ordinance.

12 In the wider design and construction community,
13 the voluntary provisions in CALGreen traditionally have
14 laid the groundwork for the energy provisions to be
15 expected in the next Code cycle. And for manufacturers and
16 installers, it encourages market development ahead of any
17 wider state -- any wider adoption at the state level.

18 As for societal benefits, CALGreen has and will
19 continue to demonstrate an exemplary record both in saving
20 energy and reducing greenhouse gas emissions where
21 implemented by local jurisdictions.

22 And lastly, as part of the 2025 Code update, we
23 are introducing voluntary building energy efficiency
24 standards for existing buildings into CALGreen for the
25 first time, which opens an exciting new avenue to pursue

1 additional energy savings in future Code cycles.

2 Next slide, please.

3 So here you have a brief overview of the efforts
4 our team has gone through to get to where we are today. We
5 held 33 public workshops on the Code measure proposals. We
6 presented all of our proposed amendments to the California
7 Green Code Advisory Committee earlier this year on March
8 18th. We held a 45-day comment period between mid-May and
9 July of this year, and during that time, we also held a
10 lead Commissioner hearing on June 5th. We then held a 15-
11 day comment period that wrapped up earlier this month. And
12 then here we are today recommending that the Energy
13 Commission adopt the proposed regulatory language.

14 Next slide, please.

15 So what are we proposing for this Code cycle?
16 For the 2025 Code cycle, the CEC intends to increase energy
17 efficiency beyond the requirements of the Energy Code by
18 introducing standards for existing buildings and amending
19 and expanding the standards for newly constructed
20 buildings.

21 Next slide, please.

22 Largely seen as one of our most impactful
23 proposals, for the 2025 Code cycle, staff have proposed a
24 standard for heat pumps to be installed when replacing an
25 air conditioner in an existing single-family home. This

1 measure is seen by many as a critical step for the
2 decarbonization of existing buildings and to support
3 California's energy efficiency and climate action goals.

4 I should note that a prescriptive pathway for ACs
5 will continue to exist. However, they will need to meet a
6 number of additional requirements to ensure energy
7 equivalency with the more efficient heat pump package.

8 Next slide, please.

9 And seen as another largely impactful proposal,
10 staff have proposed prescriptive requirements encouraging
11 the installation of solar pool heaters or heat pump pool
12 heaters when replacing a pool or spa heater in an existing
13 multifamily or nonresidential building. This measure aims
14 to improve the efficiency of pool and spa heaters and to
15 reduce their greenhouse gas emissions.

16 Next slide, please.

17 Couple of other proposals worth mentioning.
18 Staff is proposing amendments for newly constructed
19 buildings, which includes a performance measure for single-
20 family buildings. This measure establishes performance
21 targets for each climate zone based on the Energy Code's
22 proposed two-heat pump baseline, plus more efficient space
23 conditioning and or hot water distribution systems
24 depending on the climate zone and its predominant energy
25 end use. However, I should note that a user is not

1 required to install these specific measures, as these
2 performance targets can be achieved by other various
3 efficiency measures.

4 Staff is also proposing new outdoor lighting
5 standards for residential and nonresidential building types
6 alike. This measure aims to reduce glare from outdoor
7 lighting and ensure that it is used efficiently by limiting
8 the degree to which the luminaire can be tilted.

9 Next slide, please.

10 And so to conclude my presentation, staff is
11 requesting that the Energy Commission adopt staff's
12 determination that this action is exempt from CEQA under
13 the common sense exemption and adopt the proposed
14 amendments to CALGreen.

15 Next slide, please.

16 This concludes my presentation and staff are
17 available to answer any questions. But before we do, I'd
18 like to quickly acknowledge and thank the team who have
19 contributed so much to this effort.

20 Thank you.

21 VICE CHAIR GUNDA: Thank you so much.

22 Let's go to public comment.

23 MS. BADIE: Thank you. The Commission welcomes
24 public comment on item eight at this time. If you're
25 joining us in the room, we've asked folks to use the QR

1 code. We'll also take a show of hands. And if you're
2 joining us by Zoom, please use the raise-hand feature on
3 your screen or star nine if joining by phone. That'll let
4 us know you'd like to comment.

5 In the room, we're joined by Heidi Werner.

6 Heidi, if you want to approach the podium, please
7 spell your name for the record. We're asking for comments
8 to be two minutes or less. There will be a timer on the
9 screen.

10 MS. WERNER: Hi. I'm Heidi Werner, H-E-I-D-I
11 W-E-R-N-E-R, from Energy Solutions on behalf of the
12 Statewide Utility Codes and Standards Enhancement Team, or
13 the Case Team.

14 The Case Team supports the adoption of the
15 voluntary energy efficiency requirements in CALGreen.
16 Pacific Gas & Electric, San Diego Gas & Electric, Southern
17 California Edison, Los Angeles Department of Water and
18 Power, and the Sacramento Municipal Utility District
19 supported the Case Team's effort for the 2025 Code cycle.
20 The updates to CALGreen provide a cost-effective and
21 technically feasible model Code for jurisdictions that wish
22 to adopt local ordinances that will achieve energy and
23 greenhouse gas savings that go beyond what is achievable
24 through the Part 6 requirements.

25 We are pleased to see that the update includes

1 reasonable provisions for existing buildings that will
2 result in significant savings.

3 The requirements that apply to mechanical systems
4 and pool and spa heating systems when they were replaced
5 encourage the transition to electric equipment while also
6 offering flexibility to achieve similar benefits with other
7 design solutions.

8 We look forward to continuing the conversation
9 about how we might be able to draw upon the successes for
10 this CALGreen update to consider strengthening the
11 requirements for Part 6.

12 We would like to thank the Energy Commission
13 staff for their hard work and collaboration in developing
14 the updated CALGreen requirements, especially we'd like to
15 thank Michael Shewmaker, Javier Perez, Payam Bozorgchami,
16 Will Vicent, and Gypsy Achong. And also, Commissioner
17 McAllister, thank you for your support and leadership.

18 Finally, the Statewide Utility Codes and
19 Standards Program offers no-cost technical support to local
20 jurisdictions that want to adopt Reach Codes. And local
21 leadership is essential to achieving our statewide goals,
22 so please visit localenergycodes.com to learn more about
23 the program and to get in touch.

24 Thank you.

25 MS. BADIE: Thank you.

1 Transitioning to Zoom, Meg Waltner, I'm going to
2 open your line. Please unmute on your end. We're asking
3 folks to spell their name and we're asking for comments to
4 be two minutes or less as well.

5 MS. WALTNER: Meg Waltner, M-E-G W-A-L-T-N-E-R,
6 from Energy 350 speaking on behalf of the Natural Resources
7 Defense Council.

8 I just wanted to briefly speak in support of the
9 proposed voluntary CALGreen measures. We support the
10 measures as proposed. As I spoke earlier, we would have
11 preferred to see both the AC to heat pump provision and
12 pool and spa heater alterations requirements in Part 6, but
13 given that they were removed from Part 6, we strongly
14 support their inclusion here. AC to heat pumps in
15 particular is critical for encouraging the adoption of heat
16 pumps at the time of air conditioner burnout, which is just
17 sort of this key pivotal point for encouraging that
18 equipment to be heat pumped.

19 So glad to see that included and looking forward
20 to seeing that adopted by local jurisdictions throughout
21 the state.

22 Thank you for your work on the CALGreen
23 proposals and we urge you to adopt. Thank you.

24 MS. BADIE: Thank you.

25 There are no more raised hands, so back to you,

1 Vice Chair.

2 VICE CHAIR GUNDA: Thank you, Mona.

3 With that, moving to Commission discussion.
4 Commissioner McAllister?

5 COMMISSIONER MCALLISTER: Okay. Well, great.
6 Well, thanks for all the comments. And I did want to just
7 make a couple of comments.

8 I think this, you know, obviously full-throated
9 support. These are very sensible measures to include in
10 CALGreen Part 11. I think they make a lot of sense.

11 And the relevance of CALGreen, I think it's
12 really worth noting that it does help move markets. It
13 does help signal, and it helps get scale for measures that
14 may not be super popular at the moment but that it helps,
15 where they make sense, local jurisdictions can adopt. And
16 then that helps get some scale, and then that creates a
17 real positive feedback loop for, you know, reducing costs
18 and getting contractors most familiar with measures and
19 setting an expectation for the longer term. So this is a
20 really good way to sort of start that positive movement in
21 the marketplace for measures that are ready for that.

22 And specifically on the AC heat pump change outs,
23 you know, we already have heard from a number of local
24 governments that they are wanting to pursue this path.
25 Really appreciate, again, the Codes and Standards effort to

1 help facilitate that. You know, local governments, they
2 don't have a lot of resources and, you know, we'd like to
3 avoid them having to reinvent the wheel, and so get some
4 sort of batch processes, some group processes together
5 where local governments can move forward together.

6 And I think it's a reasonable expectation that we
7 will get enough local governments moving forward on this,
8 that we can talk about it at the March Electrification
9 Summit, the second iteration of that. We'd really like to
10 be able to highlight progress at the local government level
11 to -- you know, of those leading jurisdictions that are
12 doing great work to move forward with this, with that
13 measure.

14 And we have such a diverse state, so many climate
15 zones, lots of different sort of supply, energy supply, you
16 know, sources of energy, you know, lots of different
17 utilities, different rates, and so it's difficult to find a
18 one-size-fits-all approach to that measure, the AC to heat
19 pump change out requiring that measure.

20 And so, you know, totally hear the stakeholders
21 who are a bit disappointed with not having it at a
22 statewide requirement. But I think with the collaboration
23 of all of you and the local governments that move in this
24 direction, we'll be able to make progress on this quickly.
25 And, you know, we'll see how it evolves and see what the

1 context is in the next Code update. So really, I think
2 it's a prudent way to approach it and I'm really excited to
3 see the progress and facilitate progress on this.

4 And then finally, just existing buildings are
5 really where we need to make -- it's -- you know, new
6 construction, as you've heard, it's a lot of complicated
7 issues. And, you know, the previous item engendered a lot
8 of discussion and a big process. But in the grand scheme
9 of things, the new buildings are actually the easy part.

10 So existing buildings and really tuning them up,
11 getting the building shells, getting the integrity of
12 building shells, the efficiency of building shells up, and
13 then replacing lighting, replacing mechanical, that
14 decarbonization journey in existing buildings is
15 complicated and even more localized and is really going to
16 take a huge effort over many, many years.

17 In the next, you know, months, we will be rolling
18 out the big programs. You know, next month, you know, a
19 year-ish, we'll be really starting to get some scale, both
20 the state-funded programs and the IRA, federal-funded
21 programs. And so we're looking forward to using those
22 programs to also really inject the existing building
23 retrofit activities with some energy and some resources to
24 get some scaled air. And I'm really excited about the
25 progress we're making and the RREDI Division is making on

1 that as well.

2 So I wanted to sort of -- so CALGreen also can
3 really help us there to identify and really help
4 proliferate measures that help with the existing building
5 stock. So I really appreciate the commenters, again.

6 And back to you, Vice Chair.

7 VICE CHAIR GUNDA: Thank you, Commissioner
8 McAllister.

9 Chair Hochschild, do you have anything?

10 CHAIR HOCHSCHILD: No, just offer my strong
11 support again. This just echoes my comments the last item
12 and I am in full support.

13 VICE CHAIR GUNDA: Thank you. I echo my comments
14 from the previous item as well.

15 And with that, I'd love to move the item.
16 Commissioner McAllister?

17 COMMISSIONER MCALLISTER: Great, and thanks for the
18 presentation, Mike, and the whole team. Really a good job
19 with this.

20 So I'll move item eight.

21 VICE CHAIR GUNDA: Do I have a second from you,
22 Commissioner Gallardo?

23 COMMISSIONER GALLARDO: I second.

24 VICE CHAIR GUNDA: With that, let's take the
25 vote.

1 Commissioner McAllister?

2 COMMISSIONER MCALLISTER: Aye.

3 VICE CHAIR GUNDA: Commissioner Gallardo?

4 COMMISSIONER GALLARDO: Aye.

5 VICE CHAIR GUNDA: Chair Hochschild?

6 CHAIR HOCHSCHILD: Aye.

7 VICE CHAIR GUNDA: I vote aye, as well, and the
8 item passes four-zero. Thank you so much.

9 With that, we don't do the clapping every time,
10 so I'm kind of like making the long pause of what do I do
11 here? So thank you for those of you who are moving the
12 clapping there.

13 With that, we've already heard item nine this
14 morning.

15 Chair, we don't know how long you're able to
16 stay, but we're moving to item 10 now, Regents of the
17 University of California, San Diego.

18 I invite Pam to present. Thank you.

19 MS. DOUGHMAN: Hello, good afternoon, Chair, Vice
20 Chair, and Commissioners. My name is Pamela Doughman, and
21 I work on the Distributed Electricity Backup Assets
22 Program, also known as the DEBA Program, with the RREDI
23 Division here at the Energy Commission. With me are Deanna
24 Carrillo, Director of the RREDI Division, and Lisa DeCarlo
25 from the Chief Counsel's Office. Also, Brett Fooks is

1 available from the Siting Division on Zoom today.

2 In addition, we have Michael Ferry from UC San
3 Diego. He'll provide some comments and also can help
4 answer questions.

5 And then today, we are presenting for you, for
6 your consideration, a proposed grant agreement under the
7 DEBA Program's Bulk Grid Solicitation with Regents of the
8 University of California, University of California, San
9 Diego.

10 Next slide, please.

11 As part of the DEBA Program, under the Strategic
12 Reliability Reserve, this proposed agreement will support
13 grid reliability by increasing the capacity of existing
14 resources. Incremental capacity resulting from this
15 project must be made available during grid emergencies for
16 a term of five years from project online date.

17 Next slide, please.

18 For some background on the program, as part of
19 the Budget Act of 2022, the legislature and governor
20 created a strategic reliability reserve with programs such
21 as the DEBA Program and Demand Side Grid Support, or DSGS
22 Program to help meet our emergency grid needs outside of
23 our normal planning standards. The DSGS and DEBA Programs
24 serve as complementary programs to help meet grid needs
25 during extreme events. DSGS incentivizes the use of

1 existing load reduction resources, whereas DEBA
2 incentivizes the purchase of new, cleaner, and more
3 efficient energy assets.

4 Next slide, please.

5 The purpose of the DEBA Bulk Grid Solicitation
6 was to strengthen electric grid reliability by funding
7 efficiency upgrades and capacity additions for existing
8 bulk grid generators. The solicitation prioritized zero-
9 and low-emission resources and then efficiency improvements
10 for conventional resources.

11 The Notice of Proposed Awards, posted in April
12 2024, recommended five energy storage projects and four
13 conventional resource efficiency projects for a total of
14 almost \$123 million, anticipated to bring about 300
15 megawatts to support the grid by June, 2027. We plan to
16 bring additional agreements for consideration at future
17 business meetings.

18 Next slide, please.

19 This project is at the University of California
20 San Diego. This project will upgrade an existing microgrid
21 by removing a 2.5 megawatt two-hour battery system and
22 installing a 9.8 megawatt four-hour battery system. The
23 project will provide additional local capacity and the
24 additional capacities expected to charge when solar energy
25 is abundant and discharge to help meet peak demand and

1 reduce the use of natural gas peaker plants.

2 From a safety perspective, this energy storage
3 system would meet the latest Code certifications. This
4 energy storage system would use a lithium iron phosphate
5 chemistry for the batteries that is considered safer than
6 other chemistries. Additionally, UC San Diego would ensure
7 that an emergency response plan is developed per the
8 requirement of Senate Bill 38.

9 Next slide, please.

10 This process has been a team effort. I would
11 like to thank staff from the Siting Division,
12 Administrative Services Division, and the Chief Counsel's
13 Office for their contributions and assistance.

14 Staff recommends the Energy Commission adopt
15 staff's recommendation that this project is exempt from
16 CEQA and approve the proposed DEBA grant agreement with
17 Regents of the University of California on behalf of the
18 University of California San Diego.

19 And this concludes staff's presentation. We are
20 available to answer any questions you may have.

21 VICE CHAIR GUNDA: Thank you, panel.

22 We'll go to public comment now.

23 MS. BADIE: Thank you.

24 The Commission welcomes public comment on item 10
25 at this time. If you're joining in the room, we're asking

1 folks to use the QR code or raise their hand. And if
2 you're joining on zoom, you'll use the raise-hand feature
3 on your screen or star nine if joining by phone. And I'm
4 just giving that a moment not seeing anyone in the room.

5 So transitioning to Zoom, Michael Ferry, I'm
6 going to open your line if you could please unmute on your
7 end? And please spell your name for the record. If you
8 have comments, please keep them under two minutes or less.
9 Thank you.

10 MR. FERRY: Yeah, good afternoon. Can you hear
11 me?

12 MS. BADIE: Yes.

13 MR. FERRY: Yeah, hi. Thank you for the
14 opportunity today to comment. My name is Mike Ferry. I'm
15 the Director of Energy Storage and Systems at the UC San
16 Diego Center for Energy Research.

17 On behalf of the University, I'd like to thank
18 the Commission, as well as Commission staff, for supporting
19 this important project that will increase the capacity and
20 improve the safety of a major campus and regional
21 reliability asset.

22 For the past ten years, UC San Diego has been
23 safely operating a 5-megawatt-hour lithium-ion battery
24 system as part of our 55-megawatt campus microgrid. The
25 University's existing battery system is a first-generation

1 containerized battery that has provided a decade of
2 benefits to UC San Diego and beyond, including four years
3 of participation in the demand response auction mechanism
4 to provide local and system capacity during demand response
5 events.

6 With support from the Energy Commission, this
7 project will result in a 12-fold increase in energy
8 capacity above this existing system. This new capacity
9 will not only serve the UC San Diego community, but will
10 also result in substantial new abilities to provide
11 reliability benefits, including local resource adequacy to
12 the San Diego region and the statewide electricity system.

13 Moreover, and importantly, additionally,
14 replacing and upgrading the existing system with new
15 batteries and up-to-date design and engineering
16 specifications certified to existing codes and standards
17 will directly lead to improved safety and decreased risks
18 for the next 15 to 20 years of operation.

19 Again, on behalf of UC San Diego and our entire
20 campus community of over 60,000 students, faculty,
21 researchers and staff, I'd like to thank the Commission for
22 funding this important project to benefit our campus and
23 all California ratepayers.

24 Thank you. Thank you.

25 MS. BADIE: I don't see any other raised hands,

1 so back to you, Vice Chair.

2 VICE CHAIR GUNDA: Thank you, Mona.

3 Quick question, Pam. What's the timing potential
4 time on this deployment of this?

5 MS. DOUGHMAN: They expect to come online towards
6 the end of next year, I believe, if all goes well with the
7 procurement, et cetera.

8 VICE CHAIR GUNDA: Thank you so much, Pam. So I
9 have a few comments to offer.

10 You know, I want to thank the CEC staff. I
11 think, you know, much of this work is done in RREDI, so I
12 want to just uplift Deanna, Alok (phonetic), Ashley,
13 Hudson, Pam, of course, you, and many others who are
14 working behind the scenes to make this happen. In the last
15 business meeting, we had our first DEBA solicitation
16 approved, and now this is the second one. So just kind of
17 keeping this moving along, you know, it's really exciting
18 to me.

19 I think a couple of comments made earlier, you
20 know, from UC San Diego, the importance of these resources
21 on the distribution grid, supporting potentially local
22 reliability issues, as well, is just icing on the cake.

23 So I want to just remind, you know, people who
24 are listening in today that this particular effort to
25 create the Strategic Reserve under the two umbrellas of

1 DSGS, which is the demand side grid support, mostly demand
2 response and load reduction programs, and increasing supply
3 through the DEBA Program, I think is essential. As many of
4 you know, much of the Strategic Reserve today is largely
5 made up of gas fleet, the OTC power plants. And, you know,
6 our hope is to quickly transition away from them into
7 cleaner assets. And these effort, both the DEBA and the
8 DSGS, is essential to make that happen.

9 I want to also congratulate the team on the DSGS,
10 which is our Demand Side Grid Support Program. We've
11 crossed 500 megawatts recently in enrollments. I cannot
12 emphasize that enough, how spectacular of work that is.
13 And the flexibility and the creativity that staff created
14 on multiple pathways for different market participants to
15 offer solutions is just, you know, spectacular.

16 Again, I know Ashley, who's sitting in the back,
17 likes to be complimented, you know, or I should say,
18 doesn't like to be -- said anything. So, Ashley, thank
19 you. And I see her turning red from here. Thank you for
20 all the work you do.

21 And, Deanna, thank you for building an amazing,
22 amazing team.

23 With that, I look forward to supporting this
24 item.

25 Commissioner McAllister, can I ask you to move

1 the item, or unless you have comments?

2 COMMISSIONER MCALLISTER: No, I'm in full support
3 and move this item.

4 VICE CHAIR GUNDA: Commissioner Gallardo?

5 COMMISSIONER GALLARDO: Real quick, I just want
6 to say excellent presentation, Pam. Thank you so much for
7 that. And I also want to thank Michael Ferry for joining
8 us and making comments, and for UCSD, UCSD advancing us.

9 I second.

10 VICE CHAIR GUNDA: Thank you. Okay, let's vote
11 now, okay?

12 COMMISSIONER GALLARDO: Okay. Yes.

13 VICE CHAIR GUNDA: Commissioner McAllister?

14 COMMISSIONER MCALLISTER: Aye.

15 VICE CHAIR GUNDA: I vote aye, as well, and it
16 passes three-zero. I mean, this time we'll take a clap.
17 We'll give you one. We should make it a tradition
18 (indiscernible) the team that's moving the item.

19 Okay, with that, we'll move to item 11.

20 Welcome, Kevin Mori.

21 MR. MORI: All right. Good afternoon,
22 Commissioners. I am Kevin Mori from the Industrial and
23 Carbon Management Branch in the Research and Development
24 Division. Today, I am presenting two federal cost share
25 awards being funded through our INDIGO Program.

1 Next slide, please.

2 The INDIGO Program was established in response to
3 AB 209, instructing the Energy Commission to provide
4 financial incentives to implement projects that provide
5 significant benefits to electrical grid and reduce
6 greenhouse gas emissions to meet the state's clean energy
7 goals at industrial facilities. According to CARB, 22
8 percent of the state's GHG emissions come from the
9 industrial sector and is mostly from fossil fuel
10 consumption for industrial heating applications.

11 The goal of this federal cost share solicitation
12 is to primarily promote electrification of industrial
13 processes that can be electrified, reduce the use of fossil
14 fuels by industrial facilities, and increase load
15 flexibility potential of the industrial sector.

16 The proposed projects totaling \$10 million of CEC
17 funding will leverage \$90 million in federal funding from
18 the Department of Energy's Office of Clean Energy
19 Demonstrations. Both projects are located in priority
20 populations.

21 Next slide, please.

22 In the agreement with Skyven Technologies, Skyven
23 will implement an industrial steam generating heat pump
24 that uses mechanical vapor recompression to convert the
25 low-grade waste heat into more valuable steam to be used in

1 Proctor & Gamble's pulp and paper facility in Oxnard,
2 California. This industrial heat pump is projected to
3 reduce the facility's annual GHG emissions by over 3,000
4 metric tons by significantly reducing the amount of steam
5 needed need to be generated by on-site boilers. This
6 reduction would account for 76 percent of their steam-
7 related emissions and would greatly benefit the air quality
8 for the surrounding population.

9 The heat pump will be adding an electrical load
10 to the grid, but it is a base load, which does not add
11 stress on the grid and may be turned off when necessary.

12 Next slide, please.

13 In the agreement with Gallo Glass Company, a
14 hybrid electric glass melting furnace by SORG will replace
15 one of their gas-fired furnaces at their glass
16 manufacturing facility in Modesto, California. This new
17 hybrid solution will use 80 percent electricity and 20
18 percent fossil gas to melt glass for their glass production
19 and reduce annual GHG emissions by over 41,000 metric tons.
20 The solution also has the capability to use CO2 neutral
21 fuels, like biogas and hydrogen, in the future.

22 Next slide, please.

23 These two technologies have huge potential in
24 significantly reducing GHG emissions and promote
25 electrification in California's industrial sector.

1 Skyven's steam-generating heat pump has high potential to
2 be adopted across the chemical and food and beverage
3 industries where the facilities continue to use -- continue
4 to generate steam from fossil fuel boilers and the
5 temperature requirements do not exceed 400 degrees
6 Fahrenheit. With the high efficiencies of the
7 technology -- with the high efficiency of this technology,
8 a potential significant impact of 8.5 million metric tons
9 of emissions being reduced can be realized in the near
10 future.

11 And as for the hybrid electric glass furnace from
12 SORG, California's glass production consists of both flat
13 glass and glass containers. Both industries combined
14 produce over 400,000 metric tons of emissions annually in
15 California, and if SORG's glass furnace is adopted across
16 California's glass industry, it would have the potential to
17 reduce GHG emissions in half.

18 Next slide, please.

19 And with that, staff recommends adoption of
20 staff's determination that these projects are exempt from
21 CEQA and approval of these grants with Skyven Technologies
22 and Gallo Glass Company.

23 I'm available for any questions.

24 Thank you so much, Kevin.

25 And then let's go to public comment, Mona.

1 MS. BADIE: Thank you.

2 The Commission welcomes public comment on item 11
3 at this time. If you're joining us in the room, we've got
4 the QR code or you can raise your hand. And if you're
5 joining by Zoom, you'll use the raise-hand feature on your
6 screen or star nine if joining by phone. And just giving
7 that a moment.

8 I am not seeing any comments for item 11, so back
9 to you, Vice Chair.

10 VICE CHAIR GUNDA: Thank you, Mona.

11 Start with the Commissioner discussion.

12 Commissioner McAllister?

13 COMMISSIONER MCALLISTER: Yeah, absolutely.
14 Thanks so much, Kevin. Really appreciate it. Great
15 presentation, and I have appreciated the briefings on this.
16 And in full support. Really great to have INDIGO moving
17 forward and really getting some funding out there in this
18 much-needed sector. Excited about both of these
19 technologies. And the mechanical vapor recompression
20 technology is something we just need more and more of in
21 the state. And as we, you know, find -- as we look for
22 ways to decarbonize industrial sector, just really great
23 technology to get out there and be supporting and learn
24 from. So just full support, yeah.

25 VICE CHAIR GUNDA: Thank you, Commissioner

1 McAllister.

2 Kevin, just wanted to say thank you for the
3 presentation. I think the importance of the industrial
4 sector, right, it's like 20 percent of the GHG emissions, I
5 think one of the last big sectors that we really need to
6 crack, you know, given the residential buildings and
7 commercial buildings. I feel like we have a good plan on
8 decarbonization. At least we have our eyes on a clear
9 path. Same with transportation, but the industrial sector,
10 which has a large amount of emissions, is really important.
11 So I'm really appreciative of this particular item coming
12 in, also as the industrial decarbonization begins and
13 you'll have the demand growth.

14 So I'm really encouraged by thinking through
15 adapting flexibility in these proposals and super impressed
16 with the federal funding that your team was able to bring
17 together.

18 So with that, Commissioner McAllister, are you
19 willing to move the item?

20 COMMISSIONER MCALLISTER: I will. I did want to
21 make one additional comment, just sort of building on what
22 you just commented.

23 You know, the industrial sector, it's been a
24 little bit difficult to get our hands around because
25 it's -- you know, these are large emitters, but they, you

1 know, they tend to be relatively unique, each site. And so
2 it doesn't sort of lend itself to a program where people,
3 you know, just sort of -- anybody can apply and we push out
4 lots of money to many, many different projects. We really
5 have to work with each project. And so I think the
6 relatively big investments in individual projects, we're
7 sort of getting our programmatic infrastructure around --
8 our hands around that, and I think this is a really great
9 example of that. So, yeah, and agree on the flexibility
10 needs.

11 So I'll move item 11.

12 VICE CHAIR GUNDA: Commissioner Gallardo, would
13 you second?

14 COMMISSIONER GALLARDO: Great job, Kevin.

15 I second.

16 VICE CHAIR GUNDA: Okay, we'll now take the vote.
17 Commissioner McAllister?

18 COMMISSIONER MCALLISTER: Aye.

19 VICE CHAIR GUNDA: Commissioner Gallardo?

20 COMMISSIONER GALLARDO: Aye.

21 VICE CHAIR GUNDA: Thank you. My vote is aye as
22 well. The vote count is three to zero. The motion passes.
23 Thank you.

24 Let's move to item 12, and I welcome Tanner.

25 MR. KURAL: Good afternoon, Vice Chair and

1 Commissioners. My name is Tanner Kural. I work at the
2 Energy Research and Development Division, and I'm here to
3 present three recommended awards selected under the Power
4 Electronics for Zero-Emission Residential Resilience
5 Solicitation, abbreviated as PEZERR.

6 Next slide, please.

7 As we all know, there is a growing need for
8 energy resiliency due to outages that have been exacerbated
9 by climate change. Fossil fuel-based diesel generators are
10 the most prevalent form of backup power, but these backup
11 generators are a heavy source of carbon and air pollutant
12 emissions. As such, over-reliance on these run counter to
13 the state's greenhouse gas reduction targets and
14 environmental justice initiatives.

15 Although zero-emission backup power options
16 exist, commonly in the form of solar photovoltaics paired
17 with battery energy storage systems, highest costs make
18 them unaffordable to many Californians, disproportionately
19 impacting low-income, rural, and disadvantaged communities.
20 The PEZERR solicitation sought to fund the demonstrations
21 of emerging power electronics technologies to reduce the
22 cost, time, and complexity of installing zero-emission and
23 backup power systems.

24 Next slide, please.

25 Projects proposed for funding under this

1 solicitation seek to achieve the research objectives listed
2 on the slide here.

3 Projects will simplify installation by deploying
4 pre-wired or standardized solutions that minimize the
5 customization required.

6 They will improve scalability by demonstrating
7 modular designs that are adaptable to a wide variety of
8 residences.

9 They will streamline replicability by verifying
10 utility and customer acceptance of the technology's ability
11 to perform automatic safe islanding during grid outages and
12 safely reconnect when the grid power resumes.

13 They will validate the cost effectiveness by
14 conducting comparative analysis of costs and time to
15 install zero-emission backup power systems using these
16 technology innovations.

17 Next slide, please.

18 Here is a map showing where the demonstration
19 sites are located across California within all three
20 investor-owned utility service territories. The majority
21 of these projects are located within Tier 2 or 3 high-fire
22 threat districts as defined by California Public Utilities
23 Commission. And all the projects that are being supported
24 by EPIC funding are located in low-income or disadvantaged
25 communities.

1 Next slide, please.

2 The first project being proposed for award is
3 with NeWorld Energy, and they will demonstrate a UL-
4 certified meter collar device integrated with a grid
5 isolation and switch, and a 100-amp plug-in smart panel
6 expansion to -- expansion panel to manage the integration
7 of solar photovoltaics, battery energy storage, and EV
8 chargers.

9 This is the second generation of NeWorld Energy's
10 technology, and they will aim to achieve a two-week
11 interconnection for battery energy storage that's pre-
12 integrated with their product. They will feature an energy
13 management system which will enable virtual power plant
14 control of EV charging and distributed energy resources via
15 open source protocol, and this technology will be deployed
16 at two multifamily locations in Sonoma, California, in
17 Tuolumne County, and ten single-family homes in National
18 City, California, in San Diego County.

19 Next slide, please.

20 The second project proposed for award is with
21 Prospect Silicon Valley in partnership with Redwood Energy,
22 Lawrence Berkeley National Labs, Ideas Consulting, and
23 EcoFlow Technology. Together, they will demonstrate how
24 distributed load-shedding smart panels and modular plug-in
25 batteries can be centrally controlled to expand panel

1 capacity at power-constrained multifamily housing
2 developments without triggering service upgrades. They
3 will provide resilience and enable decarbonization at both
4 the apartment level and whole building level. And this
5 setup will be deployed at two affordable housing complexes
6 in Humboldt County.

7 Next slide, please.

8 Finally, the third project is with Zimeno, doing
9 business as Monarch Tractor, and they will demonstrate
10 their smart panel that's integrated with EV chargers,
11 islanding functionality, and inputs for solar and battery
12 resources at six family-owned farms across California in
13 all three investor-owned utility service territories. The
14 system will be paired with electric pickup trucks and
15 tractors with bidirectional charging capabilities, which is
16 unique to your rural applications in particular.

17 Next slide, please.

18 Staff recommends approval of all three grant
19 agreements and adoption of staff's determination that these
20 projects are exempt under CEQA, exempt from CEQA.

21 I'm available for any questions. Additionally,
22 representatives of all three grant recipients are present
23 either online or in person.

24 This concludes my presentation. Thank you.

25 VICE CHAIR GUNDA: Thank you so much for the

1 presentation.

2 We'll now hear public comment on this item.

3 MS. BADIE: Thank you.

4 The Commission welcomes public comment on item 12
5 at this time. If you're in the room with us, we've got
6 folks on the QR code, and then also you can just raise your
7 hand in the room. And if you're joining by Zoom, we ask
8 that you use the raise-hand feature on your screen, it
9 looks like an open palm, or star nine if joining by phone.

10 And in the room with us, we have Angela Richards.

11 Angela, if you'd like to approach the podium to
12 make your comment? We are asking for comments to be two
13 minutes or less. And it will be helpful if you could spell
14 your name before making your comment for the court
15 reporter. Thank you so much.

16 MS. RICHARDS: Angela Richards, A-N-G-E-L-A
17 R-I-C-H-A-R-D-S, Monarch Tractor. Thank you,
18 Commissioners.

19 We're excited to be selected for funding under
20 the PEZERR grant, which will take the first steps to bring
21 about enhanced energy resilience at California homes. We
22 thank the Energy Commission for this opportunity for
23 selecting us for this award and for their continued
24 partnership.

25 The Monarch Electric Load Distribution system,

1 MELD, is the next evolution of technologies that we're
2 already exploring to better leverage the onboard energy
3 stored in our tractor's battery, field trials for which
4 we'll be starting early next year. And the MELD takes that
5 technology a step further by allowing users to leverage
6 other backup power sources beyond the tractor, whether
7 that's another bidirectional capable vehicle or a
8 stationary battery backup source, or generation like a
9 solar array.

10 While our first deployments of the MELD will
11 indeed be at farms that already own Monarch tractors and
12 utilize them in their operations, and the panels will be
13 installed on either single family homes or multi-res farm
14 worker housing, the diverse array of possible backup
15 sources allows for the adoption of the technology at any
16 residential site.

17 We look forward to future opportunities like this
18 one that allow us to leverage our technical expertise and
19 innovative mindset to help bring about California's clean
20 energy future.

21 Thank you.

22 MS. BADIE: Thank you.

23 And we don't have anyone else in the room or on
24 Zoom as a raised hand, so I'll send it back to you, Vice
25 Chair.

1 VICE CHAIR GUNDA: Thank you, Mona.

2 I'll start with Commissioner Gallardo. Comments?

3 COMMISSIONER GALLARDO: Well, thank you, Tanner,
4 for the presentation. It was excellent. I'm really
5 excited about, you know, these opportunities.

6 And I wanted to say I thank you to Angela from
7 Monarch for showing up in person. I know it can be
8 difficult to do.

9 I attended a ribbon cutting at Monarch and was
10 really excited to see the tractors and then now taking an
11 additional step. And I also just appreciated, you know,
12 how much there is going on throughout the states. Thanks
13 for providing that map.

14 And so for all of the applicants, congratulations
15 on getting this far and thank you for applying. I know
16 that is also a lot of work and can be burdensome, but we
17 appreciate it.

18 That's it. Just wanted to highlight a couple of
19 things.

20 VICE CHAIR GUNDA: Thank you, Commissioner
21 Gallardo.

22 Commissioner McAllister?

23 COMMISSIONER MCALLISTER: Great. Well, Tanner,
24 thanks very much for the presentation. It was great. I'm
25 super excited about these projects.

1 I was just down at the smart -- well, the RE+,
2 the big, you know, clean energy conferences, as was
3 Commissioner Gallardo. And having been in the renewables
4 and efficiency business since the early 1990s, you know,
5 somebody needs to write a book about the role of power
6 electronics in the history of the electric power system,
7 because they have been transformational.

8 And this is a perfect example of that and how
9 electronics can really help us in so many ways, in
10 particular with load flexibility like this, and really be
11 tracking, you know, very finely tracking supply and demand
12 and really matching those two up in real time, and then
13 really making sure that when our loads are doing all they
14 can be and being as versatile as they can be. And, you
15 know, we can now chop up the waveform and reassemble it
16 however we want and do lots of really cool stuff with it
17 that we couldn't do even five or ten years ago.

18 So I'm super impressed with staff sort of getting
19 into that issue and learning respectively, really, how and
20 pushing us in a direction that I think is really going to
21 be fruitful. So super excited about this effort and these
22 projects. So in full-throated support.

23 VICE CHAIR GUNDA: Thank you, Commissioner
24 McAllister.

25 I also wanted to say thank you, Tanner, for your

1 presentation. You know, I just wanted to uplift kind of
2 the importance of the work, you know, you and the team has
3 done on this. You know, just so important for us to drive
4 policy with examples; right? I mean, we have these ideas
5 of, you know, better electrification, more managed
6 electrification, reducing cost of upgrades to reduce rate
7 pressure. All of that happens because of the kind of work,
8 you know, you're doing, right, the deployment strategy and
9 testing these things.

10 And also to the, you know, proposed awardees,
11 it's just kind of, you know, the technologies help a lot.

12 Personally, I think, you know, smart panels
13 really allow for low-cost opportunity to rapidly electrify
14 and move forward with our electrification targets and allow
15 for that flexibility that we were talking about and all
16 loads being good citizens of the grid. So I'm super
17 excited with that.

18 And we'll ask Commissioner McAllister to move the
19 item.

20 COMMISSIONER MCALLISTER: Yes, move item 12.

21 VICE CHAIR GUNDA: Commissioner Gallard?

22 COMMISSIONER GALLARDO: I second.

23 VICE CHAIR GUNDA: Okay, with that, we'll take
24 the vote.

25 Commissioner McAllister?

1 COMMISSIONER MCALLISTER: Aye.

2 VICE CHAIR GUNDA: Commissioner Gallardo?

3 COMMISSIONER GALLARDO: Aye.

4 VICE CHAIR GUNDA: Thank you. My vote is aye as
5 well. The vote count is three to zero. Item passes.

6 Thank you.

7 Then let's go to item 13.

8 Welcome Joshua to present.

9 MR. MESERTH: Good afternoon, Chair and
10 Commissioners. My name is Josh Meserth. I work under Ben
11 De Alba in the Fuels and Transportation Division. Today, I
12 am proud to be presenting the proposed awards for the first
13 solicitation of the National Electric Vehicle
14 Infrastructure, or NEVI for short, Formula Program.

15 We'd like to recognize the efforts of the
16 (indiscernible) CEC staff and Caltrans staff who helped get
17 these projects where they are today.

18 Next slide.

19 The NEVI Formula Program was established under
20 the Infrastructure Investment and Jobs Act 2021 and will
21 give California \$384 million over the course of five years.
22 Through this program, at least four 150-kilowatt DC fast
23 charger ports will be installed every 50 miles or less over
24 6,600 miles of interstates, U.S. routes, and state routes
25 within the state. Moreover, the NEVI Program emphasizes

1 equity and inclusivity; 50 percent of the charge reports
2 must be located in disadvantaged communities or low-income
3 communities, while 40 percent should be situated in Justice
4 40 communities on a per-award basis.

5 The California NEVI Program is the fruit of hard
6 work from a partnership formed of the CEC and Caltrans. We
7 expect to release Solicitation 2 later this year.

8 Next slide.

9 The first NEVI solicitation was released in
10 October of 2023 and made available \$40.5 million to build
11 fast chargers. On June 3rd, 2024, staff announced 11
12 proposed awards. Today, we are bringing nine of those
13 awards to you for your approval. The remaining two project
14 agreements will be brought to a business meeting for
15 approval later this year.

16 These first nine NEVI awards total \$32.7 million
17 in federal funds and \$44.9 million in private match. The
18 nine project agreements cover six corridor projects
19 consisting of 64 new charging stations and 458 DC fast
20 charging ports.

21 Next slide.

22 On this slide you will see the locations of the
23 six corridor group projects. These six corridor groups are
24 the first of the 22 corridor group projects in the state's
25 NEVI program and are the top six corridors when ranked by

1 priority based on factors such as proximity to
2 disadvantaged and low-income communities, potential
3 benefits to tribes, and projected need for additional
4 charging stations to accommodate said growth.

5 Furthermore, all of the 22 corridor projects are
6 alternative fuel corridors, a federal designation made by
7 the Federal Highway Administration to support the
8 installation of infrastructure at strategic locations along
9 major national highways. They stretch from Sacramento down
10 to Los Angeles and San Diego, and then out east toward the
11 Nevada border near Las Vegas. The proposed awards cover
12 approximately 1,300 miles of some of California's most
13 traveled roadways in 48 different cities.

14 Next slide.

15 The NEVI Program is a great benefit for
16 Californians in the transition to EVs. Projected projects
17 awarded through California's NEVI Formula Program will
18 provide California with good paying job creation to design,
19 build, and maintain the new EV infrastructure, improved EV
20 charging availability, and reduced range anxiety with more
21 numerous charging stations and a consistent and dependable
22 network of fast chargers, cleaner air from reduced
23 emissions by facilitating more EV replacement of ice
24 vehicles, and again, this is federally funded, so
25 California can still focus on other programs in helping us

1 achieve our carbon goals.

2 Next slide.

3 Here are the nine proposed agreements before you
4 for approval. As you will notice in some cases, staff is
5 recommending the multiple awards for the same corridor
6 group project. Today's proposed awards are Zero6 EV
7 Charging California, LLC in corridor groups 6A, 6B and 7,
8 Skychargers, LLC in corridor groups 6A and 6B, Sustainable
9 Energies California, LLC in corridor groups 16, 19 and 20,
10 and Electrify America, LLC in corridor group 7.

11 Next slide.

12 Staff recommends the Commission to approve the
13 nine agreements and adopt the CEQA findings. These
14 agreements are exempt from CEQA.

15 Thank you.

16 VICE CHAIR GUNDA: Thank you, Josh, very much.

17 We'll go to public comment.

18 MS. BADIE: Thank you.

19 The Commission welcomes public comment on item 13
20 at this time. If you're in the room, you can just raise
21 your hand. And if you're on Zoom, please use the raise-
22 hand feature on your screen, or star nine if joining Zoom
23 by phone.

24 And not seeing anyone in the room, so I'm going
25 to transition to Zoom.

1 Jared Klapperich, I'm going to open your line.
2 Please spell your name for the record. We're asking for
3 comments to be two minutes or less.

4 MR. KLAPPERICH: Yeah, hi. Jared Klapperich,
5 J-A-R-E-D K-L-A-P-P-E-R-I-C-H. I'm the Manager of Zero6 EV
6 Charging in California and Vice President of Capital
7 Management at Zero6 Energy.

8 Zero6 Energy provides end-to-end energy solutions
9 in wind, solar, carbon capture, green hydrogen, EV
10 charging, hydroelectric, and other zero-carbon energy
11 technologies. We've got engineers, manpower, and funding
12 to design, develop, build, own, operate all sorts of clean
13 energy projects. And we're very proud of our 30-plus year
14 history in clean energy and the energy transition.

15 On behalf of Zero6 and our partners, including
16 Faith Technologies, I just want to express our gratitude
17 for the opportunity to partner with the California Energy
18 Commission through this NEVI Program.

19 And specifically, I'd like to thank Jane Berner
20 and Josh Meserth of the CEC, who've helped keep us on a
21 path to getting these projects installed as quickly as
22 possible. Your commitment to creating a robust, reliable,
23 and accessible EV charging network, it's truly commendable.
24 And we believe this progress is critical, not only to
25 supporting the increasing adoption of EVs, but to achieving

1 California's ambitious climate goals and reducing emissions
2 on a large scale.

3 Your work in reducing emissions and creating
4 sustainable transportation options is helping to shape a
5 healthier, more affordable, and more resilient future for
6 all Californians. And we are truly proud and grateful to
7 have the opportunity to be a part of that effort. We hope
8 to move as quickly as possible to enhance the experience
9 for EV drivers, while also reducing greenhouse gas
10 emissions.

11 And additionally, we're committed to upholding
12 the highest standards as we implement these projects and
13 assure their success for years, decades, even to come.

14 Thank you again for this incredible opportunity.
15 And we look forward to our continued partnership in
16 advancing electric mobility and clean energy. Thank you.

17 MS. BADIE: Thank you.

18 There are no other raised hands for this item.
19 Back to you, Vice Chair.

20 VICE CHAIR GUNDA: Thank you, Mona.

21 We'll move to Commission discussion with --
22 starting with Commissioner McAllister.

23 COMMISSIONER MCALLISTER: Well, thanks, Vice
24 Chair.

25 And thanks, Joshua, that was great. I think at

1 least one of us had to make a comment because Commissioner
2 Monahan's not here. We have to channel her, we found a
3 way, it's hard, but she's much closer to NEVI and, you
4 know, transportation electrification generally, but I think
5 from sort of what I've seen, the NEVI Program is just a
6 really great, large, much needed and well-conceived federal
7 program and providing a lot of money to the states to do
8 this work.

9 And so it's just really great to -- I mean, it's
10 another example of the Biden administration leadership just
11 on all things clean energy. And so it's just really great
12 to have that alignment and to be able to execute on these,
13 you know, big promises and these big needs that we have and
14 coordinate that across the other states.

15 And I guess that would be my one question is how
16 we're -- how California is coordinating sort of the
17 corridors with our neighboring states, sort of, you know,
18 on the road to Vegas and elsewhere. Is there a
19 conversation going on sort of between energy offices or
20 between, you know, administrations about sort of how we do
21 the handoffs and deployment timelines and things like that?

22 MR. KLAPPERICH: NEVI, I would say there's
23 (indiscernible) working groups that have been working
24 together to kind of follow the EV parade.

25 COMMISSIONER MCALLISTER: Great.

1 MR. MESERTH: There's other working groups, as
2 well, that can go into other topics like NEVI related, such
3 as security and whatnot. We also have other programs for
4 like CFI, (indiscernible) approach to trying to figure out
5 how to best achieve medium-duty, heavy-duty (indiscernible)
6 NEVI. I think if you have another answer --

7 COMMISSIONER MCALLISTER: No, that's a great
8 answer.

9 MR. MESERTH: No, that was a great answer. I'm
10 really gratified to hear that NASEO's coordination, you
11 know, multi-state coordination is useful and have an
12 impact. I'll definitely take that back because they'll be
13 pleased to hear. But thanks a lot for all your efforts to
14 get these resources where they need to go.

15 So, yeah, and thanks for all the -- congrats to
16 all the awardees and thanks for all your work as well.

17 VICE CHAIR GUNDA: Thank you, Commissioner
18 McAllister.

19 Commissioner Gallardo?

20 COMMISSIONER GALLARDO: Yeah, thank you. I also
21 want to say congratulations to Commissioner Monahan and to
22 Ben, Joshua. I know that it's been a long time that you
23 all have been working on this, so it's nice to see this get
24 to this point. And I also think it's important that you
25 highlighted the partnership with CalSTA, which is fantastic

1 that we're working closely with them.

2 And Jared from Zero6, I wanted to thank you for
3 joining us and for making the remarks. And this is really
4 exciting to see, you know, how many more chargers we'll
5 have available throughout the state.

6 I'm just curious, I did have a question. You
7 know, it looked like from the map, the northern-most part
8 of the state, you know, wasn't included. Were there any
9 concerns or comments from folks in that area about that
10 or --

11 MR. MESERTH: (Off mic.) Is there anything?
12 This is only covering 6 out of the 22 corridor groups. So,
13 you know, like whenever someone asks like, oh, what about
14 like my site, we can -- we always say, well, you know,
15 we're trying to take care of these groups first and then
16 down the line and we have multiple solicitations that
17 could, you know, accommodate you as well.

18 COMMISSIONER GALLARDO: Okay, that's good to
19 hear. All right. Because I feel like that area does say
20 that they keep getting left out, but I know that a majority
21 of the population of the state is more southern-bound. So
22 thank you so much, appreciate it.

23 VICE CHAIR GUNDA: Thank you, Commissioner
24 Gallardo.

25 Josh, I also want to just thank you. I don't

1 have any questions. I just want to acknowledge you and the
2 entire team on the leadership. And as Commissioner
3 McAllister pointed, I'm trying to put my Commissioner
4 Monahan hat and just say how amazing, first of all, she is,
5 which she wouldn't say, but then I know hard work on your
6 team's part to stand up to this really important program.
7 And I think it's good to give a shout out to what a good
8 example of the federal government leading this large
9 investments and collaborating with the states to make such
10 a large investment happen. So, kudos to all the work that
11 you're all doing.

12 And, you know, from an EV penetration point, I
13 think we talked about the importance of charging stations
14 and the predictability and the ability to find a charging
15 station at places along this long corridor, so I'm really
16 grateful for this work. I'm looking forward to supporting
17 it, so thank you.

18 With that, let me see if Commissioner McAllister
19 wants to move the item?

20 COMMISSIONER MCALLISTER: Okay, move item 13.

21 VICE CHAIR GUNDA: Commissioner Gallardo?

22 COMMISSIONER GALLARDO: I second.

23 VICE CHAIR GUNDA: Okay, we'll go to the vote
24 now.

25 Commissioner McAllister?

1 COMMISSIONER MCALLISTER: Aye.

2 VICE CHAIR GUNDA: Commissioner Gallardo?

3 COMMISSIONER GALLARDO: Aye.

4 VICE CHAIR GUNDA: Thank you. My vote is aye as
5 well. The vote count is three to zero and passes. Thank
6 you.

7 So with that, let's go to item 14, Lead
8 Commissioner or Presiding Member Reports.

9 Let's see, Commissioner, who's ready to get
10 started? Okay, Commissioner McAllister, go ahead.

11 COMMISSIONER MCALLISTER: Great. Well, it's been
12 a long meeting, so I'll try to be brief.

13 All right, so I wanted to highlight a little bit
14 of the international work we've been doing, just some
15 milestones we've hit.

16 Recently signed a new Memorandum of Understanding
17 with Baja Norte. So the new governor is super motivated
18 and a great delegation up and signed an MOU covering a
19 bunch of different topics, and really looking forward to
20 getting a work plan in place and collaborating with them.

21 I want to just thank my Chief of Staff Bryan
22 Early, who has been leading the engagement with Mexico on a
23 bunch of different fronts. And it's a lot of work, but I
24 think it's very gratifying, as well, and to build these
25 partnerships. And with a new president coming in in Mexico

1 in December, Claudia Sheinbaum, she is a superstar and we
2 have very close ties in California with her. She did her
3 PhD work on clean transportation at Berkeley Lab, UC
4 Berkeley. So she's definitely a friend of the Energy
5 Commission and the State of California. So looking forward
6 to deepening those partnerships.

7 And together with you, Vice Chair, we received an
8 Indian -- a delegation from India following up on our visit
9 there, which I just want to give kudos to Tina and the team
10 who's been facilitating that. And so it's great to see
11 that those relationships also persisting and expanding.

12 I just got back last night from a few days at the
13 Smart Electric Power Alliance board meeting, and then the
14 RE+ Conference, which is, I mentioned that, I didn't really
15 finish my thought in the power electronics item, but it's
16 the 20th anniversary of RE+. It used to be called Solar
17 Power International, Intersolar. It was, you know, co-
18 located. It's been through different names, but it's now a
19 partnership between the Solar Energy Industries Association
20 and the Smart Electric Power Alliance, SEIA and SEPA.

21 And it started 20 years ago and it was small, it
22 was just a, you know, couple of conference rooms, you know,
23 in San Francisco. And now it surpasses 40,000 attendees.
24 You would not believe the technology that is in the halls.
25 I mean, this is serious investment. And there are only two

1 conference centers that can even hold the conference. And
2 it really outgrew Anaheim, so the one that's left is Las
3 Vegas so that's where it will be from here on out pretty
4 much.

5 But also convenes a lot of international
6 interest. And so I was able to meet with the grid operator
7 and regulators of Israel. Actually, it was a super
8 interesting conversation with them. And a group, the
9 Department of Commerce, together with the California
10 Hydrogen Business Council was sponsoring, co-sponsoring,
11 sort of in conjunction with the conference, a delegation
12 from the Southern Cone of South America.

13 And so I was able to have dinner and engage with
14 a group of regulators and sort of industry leaders, trade
15 leaders from -- and two ambassadors, actually, from
16 Argentina, U.S. ambassadors in Argentina and Uruguay, so
17 Argentina, Uruguay, and Paraguay, and Chile. So they're
18 trying to build those relationships. And, you know, I told
19 them, obviously, we were at their disposition if they
20 wanted to leverage California. And so and they may take us
21 up on that. So very positive interactions there.

22 In general, I wanted to, well, I wanted to
23 highlight again the March Electrification Summit. Again,
24 Bryan is just taking the lead on that, doing a fantastic
25 job, and coordinating with the Chair's Office and just

1 really trying to make it all it can be. And it's got a lot
2 of traction. We're doing it again. We're co-sponsoring it
3 with -- or we're sort of developing it with EPRI, so I
4 think that'll also be a great event.

5 And I wanted to thank -- so on the India
6 delegation, I want to thank Maggie, my advisor who has just
7 been working really hard to coordinate a lot of great
8 meetings and just she's so, so good and just so organized
9 and smart and just an incredible asset to the Commission
10 and to my office.

11 And then you all heard Claire talk earlier about
12 data. And, you know, it's a mind-boggling, the
13 possibilities with this data. And, you know, I think we
14 need to work hard to keep disciplined and focus on the use
15 cases that really makes the most sense.

16 But I did want to also thank my advisor, Hughson
17 Garnier, for helping Claire just get access to the tools
18 and resources that she needed to just jump right in and get
19 the data and do analysis and sort of get. And then Hughson
20 is also incredibly good with data. So like he's learning a
21 ton and I think really bringing a lot of value as well.

22 So, you know, building these bridges within the
23 Commission and just, it's a great momentum builder here, so
24 really happy about that.

25 And then finally, I just wanted to thank

1 Executive Office and senior staff for all of the -- just
2 all the flexibility and rapid response around the budget.
3 You know, I think you insulate us somewhat from that. And
4 I just really appreciate it, like so much going on, so
5 complicated, so many different priorities that need
6 balancing in a moment, and so I just really want to say
7 thanks for that because uh it's not an easy situation when
8 there's budget shortfalls and you just are so professional
9 and so diligent in responding to the Governor's Office and
10 all different asks that come through a lot in that area, so
11 thanks.

12 That's it for me thank.

13 VICE CHAIR GUNDA: Thank you, Commissioner
14 McAllister.

15 Commissioner Gallardo?

16 COMMISSIONER GALLARDO: Yeah, and I have slides,
17 if the team can pull those up? We'll go to the next one.

18 So this is an invitation to the Justice Access,
19 Equity, Diversity, and Inclusion Workshop that's happening
20 next Monday. I think it is the 16th of September from 1:00
21 to 4:00 p.m. in the Rosenfeld Room. It's also going to be
22 available via Zoom. So this is meant to talk more about
23 some of the items that we talked about earlier today when
24 we did the JAEDI Report, and also focusing in on the JAEDI
25 framework that we adopted through the 2022 IEPR.

1 So I think there's some things that I'm seeing
2 pop up now, you know, being implemented in the staff's work
3 from the framework. One of the examples is using the new
4 term tribes and justice communities to kind of cover as an
5 umbrella all the various terms that are out there, like
6 disadvantaged communities, rural communities, low-income
7 communities, et cetera.

8 So if you want to learn more and provide more
9 input, I invite you to come to the workshop. The
10 representatives from each of the Divisions here at the
11 Energy Commission are also going to be talking about how
12 they're implementing the framework and talking about some
13 examples of the work they're doing to embed equity more
14 thoroughly.

15 So we'll go to the next slide now.

16 These are just some photos from a summit that I
17 attended, the 2024 National Black and Latino Economic
18 Summit in Tampa, Florida. So the focus here was trying to
19 determine more opportunities for small businesses and
20 diverse owned businesses. They're very excited to get into
21 the clean energy space, so I was invited to talk about what
22 opportunities there are.

23 And they were also excited about the Greenhouse
24 Gas Reduction Funds, GGRF. So, you know, trying to talk
25 about what types of connections they can make to Energy

1 Commission and to other entities to learn more about all
2 the various steps they need to take. And, you know, I was
3 clear that we don't have that specified yet how it's going
4 to work out and it is new. But they're very interested and
5 so I want to make sure we encourage them to learn more.

6 And we'll go to the next slide.

7 So these are some images from the Utility Tribal
8 Summit that several of us from the Energy Commission
9 attended, including Commissioner Monahan, Sierra Graves,
10 our Tribal Liaison. There's Lorraine from Chair's Office.
11 I think it's, she's new, and I'm blanking on her name right
12 now, Dina or Deanna, and I think she's in FTD. And then
13 also our newest member of PAO Plus (phonetic), and I'm also
14 blanking on her name, I can't believe it, Davina.

15 So I just wanted to show how much representation
16 we had at the utility summit. I think it was really
17 impressive, and it shows how, you know, we've prioritized
18 our relationship with the tribes, and they were really
19 grateful to have us there. It was also helpful to engage
20 with the utilities, so we don't always get to engage with
21 the investor-owned utilities. They had a lot of
22 representatives there, as well, so helpful to learn about
23 each other's efforts and how we can be more collaborative
24 and supportive.

25 Go to the next slide.

1 And then finally, my Chief of Staff, Erik Stokes,
2 and I had the pleasure of going on a tour with SCPPA to
3 visit some of their different sites. We went to Riverside
4 and Burbank. We're just really excited to learn more about
5 the publicly owned utilities, all the great work that
6 they're doing, and how much they customize their efforts to
7 the local communities. So impressive. And just really
8 grateful that they were willing to do that for us.

9 And I think that's the last slide. We'll end
10 there. That's it.

11 VICE CHAIR GUNDA: Thank you, Commissioner
12 Gallardo.

13 I have a few quick updates to share. So I think
14 just want to start with the grid reliability. So I want to
15 go through our focus areas.

16 I think we did have another grid tightness event
17 over the last week and a half or so, and largely because of
18 the heat in Southern California, the build out. So it kind
19 of like just points to while the system might look okay,
20 the system load might look okay, you're like really
21 beginning to test the limits of local transmission issues
22 and congestion and local reliability. So I want to flag
23 that.

24 So one data point for you, SCE has a new record,
25 historic record. They passed 26 gigs. You know, it's a

1 solid gig over their previous history. So just kind of
2 wanting to watch that these kind of are happening both at a
3 system level, but also this local level where you have
4 congestion issues.

5 Another area of focus for our office right now is
6 the petroleum efforts. So I want to thank the Executive
7 Office, the CCO. I see Lindsay in the back with media.
8 It's been an all-hands work to think through both the
9 governor's proposal, but also tracking carefully the
10 prices.

11 This is the time of the year when the overall
12 production to begin with in California is lower than the
13 peak. You know, that's kind of just what we observe. You
14 know, we have a peak demand in late summer that exceeds the
15 overall refining capacity in California. So any outages,
16 any supply shortfalls will really create those price
17 spikes.

18 So we are beginning to see an upward trend in the
19 prices. Over the last month, we've moved up about \$0.15
20 per gallon.

21 Oh, yeah, go ahead.

22 COMMISSIONER MCALLISTER: So just a question on
23 that.

24 What's the sort of horizon for the seasonal
25 change out and the formulations? And so does that -- or

1 when do they need to sort of start, you know, moving their
2 production and how does that impact supply?

3 VICE CHAIR GUNDA: Yeah, so for the summer blend
4 to winter blend, I believe it's both November 1st. There
5 is the transitional time there. But the summer blend
6 movements earlier in April and June -- March and April are
7 different for south and north. So you do see from a winter
8 to summer blend the decrease (phonetic) in the market. But
9 typically in the late summer as you move to winter blend,
10 you don't see the same thing because you're using the
11 CARBOB summer blend and adding things into it rather than
12 removing.

13 COMMISSIONER MCALLISTER: Right. Right.

14 VICE CHAIR GUNDA: Right?

15 COMMISSIONER MCALLISTER: Got it.

16 VICE CHAIR GUNDA: So you have that.

17 So overall, I think, you know, it's kind of this
18 is the time we are watching information. I think, you
19 know, I just want to say, a year ago we did not have a lot
20 of this information and, really, it's been an all hands
21 effort. I want to recognize the independent department
22 within our Commission, which has been, you know, doing
23 prosecutor/investigatory work which has been complimentary
24 for us.

25 So overall, I feel like we are in a good tracking

1 space. I think we still have a ways to go on ability to
2 deploy tools to maximize the consumer protections. But I
3 think we are heading in the right way.

4 Also want to just comment, you already mentioned
5 one of the things that we work on in our office is
6 international engagement, particularly in India. You
7 already covered that, which is great.

8 So that's all I have as main topics. There are,
9 you know, many things to talk about, but a sincere
10 gratitude to our staff. I want to uplift EAD. They have
11 been under, you know, under the hammer, under the press,
12 whatever we say. It's been a lot of work for them and the
13 reliability funds and stuff and Step Team for coordinating
14 and helping across.

15 So with that, I'm good.

16 Did you want to? Yes.

17 COMMISSIONER GALLARDO: Yeah, I just want to make
18 sure I correct the name. So it was Dina from FTD and
19 Davina from PAO Plus, so thank you for letting me do that.

20 VICE CHAIR GUNDA: Awesome. Thank you.

21 With that, let's go to item 15, Executive
22 Director's Report.

23 EXECUTIVE DIRECTOR BOHAN: Vice Chair,
24 Commissioners, no report.

25 I just want to underscore the thanks that you

1 provided too. It takes a village to pull together the
2 Codes, but in particular, I wanted to call out Lisa and her
3 team for collaborating so effectively. And the gears are
4 running very smoothly and she deserves a lot of credit for
5 her stewardship of that.

6 COMMISSIONER MCALLISTER: Thanks, Drew, I really
7 appreciate that and absolutely agree.

8 Thanks, Lisa.

9 MS. DECARLO: Yeah. Thank you.

10 VICE CHAIR GUNDA: Let's go to item 16, Public
11 Advisors Report.

12 MS. BADIE: Good afternoon again. I just wanted
13 to announce that the next Disadvantaged Communities
14 Advisory Group meeting is on Friday, September 20th. And
15 among other agenda items, the DACAG is going to hear about
16 the development of the Building Energy Performance Strategy
17 Report by the CEC, and also an update on federal funding
18 opportunities and their status from the CEC.

19 That was it for my report. Thank you.

20 VICE CHAIR GUNDA: Thank you so much, Mona.

21 Moving to item 17, Chief Counsel's report.

22 MS. DECARLO: Nothing to report. Thank you.

23 VICE CHAIR GUNDA: Thank you so much.

24 So I kind of like the idea of closing on a round
25 number. We can close at 4:00 or we can close at 4:30. So

1 I have a few other things to say.

2 With that choice, you know, I would say we move
3 to adjourn. Thank you.

4 (The meeting adjourned at 3:58 p.m.)

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

CERTIFICATE OF REPORTER

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 September, 2024.



MARTHA L. NELSON, CERT**367

CERTIFICATE OF TRANSCRIBER

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.

I certify that the foregoing is a correct transcript, to the best of my ability, from the electronic sound recording of the proceedings in the above-entitled matter.



MARTHA L. NELSON, CERT**367

September 26, 2024