

DOCKETED

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BUSINESS MEETING

BEFORE THE

CALIFORNIA ENERGY COMMISSION

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

WEDNESDAY, OCTOBER 18, 2023

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

In-person at:
 California State Board of Equalization
 450 N Street
 First Floor Auditorium
 Sacramento, California 95814
 (Wheelchair Accessible)

Note new location for this meeting

Remote Access via Zoom™

Please note that the California Energy Commission (CEC) aims to begin the business meeting promptly at the start time and the end time is an estimate based on the agenda proposed. The meeting may end sooner or later than the time indicated depending on various factors. To continue to protect the health and safety of civil servants and the public, this meeting will be held consistent with Senate Bill 143 (Stats. 2023, chapter 196) and one or more commissioners may participate remotely.

Pursuant to the California Code of Regulations (CCR), title 20, section 1104(e), any person may make an oral comment on any agenda item. To ensure the orderly conduct of business, such comments will be limited to two minutes or less per person.

Reported by:
 M. Nelson

APPEARANCES (*Present via Zoom)

Commissioners

David Hochschild, Chair
Siva Gunda, Vice Chair
*Andrew McAllister
*Patty Monahan
*Noemi Gallardo

Staff Present:

Drew Bohan, Executive Director
Linda Barrera, Chief Counsel
Mona Badie, Public Advisor
Dorothy Murimi, Public Advisor's Office
Brady Borcharding, Director, Office of Governmental
and International Affairs
Ashley Emery, DEBA Program Branch Manager
Deanna Carrillo, Director, RREDI Program
Christine Collopy, Deputy Director, RREDI Program
Peter Strait, Appliances Branch Manager
Lisa DeCarlo, Chief Counsel's Office
Michael Murza, Chief Counsel's Office
Chad Oliver, Chief Counsel's Office

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P R O C E E D I N G S

OCTOBER 18, 2023 10:03 a.m.

CHAIR HOCHSCHILD: Okay, good morning friends. I'm David Hochschild, Chair of the California Energy Commission. I want to welcome everyone to today's meeting. Today is October 18th, and I call this meeting to order. Joining me are Vice Chair Gunda, Commissioner McAllister, Commissioner Monahan, and Commissioner Gallardo. We have a quorum.

Let's begin with the Vice Chair leading us in the Pledge of Allegiance.

(Whereupon the Pledge of Allegiance was recited.)

CHAIR HOCHSCHILD: Okay, good morning. So we are a bit scattered. Today we're in a new site. Two of us are remote. I'm going to have to leave a little bit early before noon to catch a flight, so bear with us on these logistics.

We're going to begin with the public comment, so let's go ahead and move to that and then we'll go agency announcements.

MS. BADIE: Sorry, Chair, I stepped away there for a second.

Okay, so now we'll take public comment. This is the public comment period for any item on the agenda

1 including non-voting items. We do ask that if you have a
2 comment on a voting item, you wait for the dedicated public
3 comment period for that one.

4 And first we'll go to folks in the room using the
5 QR code. All right, we don't have anyone queued in the
6 room. I'm going to look for a show of hands if anyone
7 wants to come in on Item 1. All right, and then now next
8 I'll go to Zoom and see if there's any raised hands on
9 Zoom. On Zoom, you'll use the raise hand feature. It
10 looks like an open palm at the bottom of your screen. And
11 if you're joining by phone, please press *9 raise your
12 hand.

13 All right, we have a few raised hands on Zoom.
14 Sherri Lightner. I'm going to open your line. Please spell
15 your name for the record, announce any affiliation, and you
16 may begin. We are asking for comments to be two minutes or
17 under. I'm opening your line now. Sherri, you'll have to
18 unmute on your end.

19 MS. LIGHTNER: Okay, I did it. My name is Sherri
20 Lightner, S-H-E-R-R-I, last name L-I-G-H-T-N-E-R. Okay to
21 start?

22 MS. BADIE: Yes, please.

23 MS. LIGHTNER: I have no affiliation except with
24 myself, how's that? I am a licensed mechanical engineer
25 and worked in the nuclear and aerospace industries for 23

1 years. I also served as a City of San Diego council member
2 and council president. I submitted a comment to today's
3 docket. My husband and I are weeks away from final
4 approval on our new ADU. We want the Commission to agree
5 with us that we meet the solar PV system requirements.
6 Since it has been a lengthy process our project must meet
7 the Title 24 2019 version, which are all low-rise
8 residential buildings shall have a photovoltaic system with
9 annual electrical usage as determined by Equation 150.1(c).

10 Using this equation, our ADU requires 1.8
11 kilowatt DC. CalcERTS, Inc. calculations performed in
12 January of 2021 during the ADU permitting process showed
13 2.02 kilowatt DC were needed. We installed a total of 7.8
14 DC in June of 2021 to meet the requirements for the ADU in
15 our home. We meet the requirements of Code Section
16 150.1(c)(14) as it is stated. However, the City of San
17 Diego is using a PowerPoint presentation from June of 2021
18 to now require that our ADU solar PV system be newly
19 installed or have newly installed panels and that it must
20 be done after the ADU building permits are issued.

21 What is the Title 24 2019 reference for these
22 requirements, which seemed to be the same as the new
23 requirements for 2022 Title 24? Are there secret
24 provisions of 2019 Title 24 code section? Does the code
25 section mean what it says, or is it subject to

1 interpretation? And if so, by whose authorization?

2 If the added requirements are correct, we will be
3 forced to remove and replace six of our panels. Otherwise,
4 we will be producing far more power than we need and also
5 jeopardize our grandfathered net metering agreement, a
6 waste of time and money.

7 Please agree with us that our project complies
8 with 2019 Title 24. Thank you for your time.

9 MS. BADIE: Thank you, Sherri --

10 MS. LIGHTNER: I timed it.

11 MS. BADIE: Great job, Sherri. Thank you.

12 MS. LIGHTNER: Thank you.

13 MS. BADIE: Next we have Sakereh Carter.

14 Sakereh, I'm going to open your line. If you could
15 announce any affiliation, spell your name for the record.
16 And also we're asking for comments to be two minutes or
17 less.

18 MS. CARTER: Hi, my name is Sakereh. That's S-A-
19 K-E-R-E-H, Carter. And I'm a Senior Policy Strategist with
20 Sierra Club, California.

21 First, we thank the CEC for proposing a dual fuel
22 baseline for new construction in the 2025 Energy Code.
23 That's a significant step towards the state goals of
24 decarbonizing the building sector. However, the current
25 proposal to place AC to heat pump changeouts under the

1 voluntary portion of the Building Code as opposed to Part
2 6, the prescriptive portion, is grossly misguided.

3 There are numerous benefits to placing AC to heat
4 pump changeouts under Part 6. Including lower long-term
5 utility bills, tax breaks, elimination of harmful air
6 pollutant emissions, reduction of climate change in
7 greenhouse gas emissions, and greater energy efficiency.

8 Plus the California Air Resources Board and the
9 Bay Area Air Quality Management District will enforce the
10 no NOx emission guidelines in 2029 and 2030. Therefore, it
11 makes no sense to replace an AC with another AC unit, just
12 to turn around and install a heat pump when the guidelines
13 take effect.

14 Also, the state has committed to deploying 6
15 million heat pumps by 2030. Why not contribute to this
16 goal by replacing end-of-life AC units with heat pumps?

17 It's time to fully commit to building
18 decarbonization. As one more cycle of harmful emissions,
19 climate altering pollutants, high utility bills and
20 inefficient appliances will contribute to unnecessary
21 climate catastrophes, preventable illnesses and
22 unaffordable utility bills.

23 1.9 million AC units are ready for changeout
24 right now. So what are we waiting for? Thank you for your
25 time.

1 MS. BADIE: Thank you.

2 Next, we have John Armstrong. John, I'm going to
3 open your line. Please spell your name for the record,
4 announce any affiliation. And we're asking for comments to
5 be two minutes or less.

6 MR. ARMSTRONG: Hello. My name is John
7 Armstrong, J-O-H-N A-R-M-S-T-R-O-N-G. I'm a member of the
8 Sierra Club. The previous person said quite a bit of what
9 I had to say, so I'll read something else.

10 To PG&E and Big Oil, heat pumps represent a
11 serious threat to the profit structure, goals, and
12 commitments. Please do not cater to any influences from
13 PG&E and Big Oil. Basically, that's all I want to say
14 other than to underscore what the previous person said.
15 I'm calling to voice my support for a prescriptive pathway
16 to replace air conditioning units, and heat pumps in Title
17 24 for Part 6 of the 2025 Energy Code.

18 Our climate health and pocketbooks cannot wait
19 another cycle to replace gas-powered air-conditioning units
20 with healthy, cost effective and climate friendly electric
21 heat pumps. That's all. I'm okay.

22 MS. BADIE: Thank you for your comment.

23 Next, we have Paul Wermer. Paul, I'm going to
24 open your line, please spell your name for the record,
25 announce any affiliation. We're asking for comments to be

1 two minutes or less. Please unmute on your end. There you
2 go.

3 MR. WERMER: Yes. Good morning. My name is Paul
4 Wermer, P-A-U-L first name, last name W-E-R-M as in Mary-E-
5 R. And I'm with the San Francisco Climate Emergency
6 Coalition. Lots of people have made comments about why we
7 need to go all-electric. I'd like to add one more.

8 When we're talking about energy efficiency, and I
9 really think that's what the Energy Commission is focused
10 on, we need to be looking not at just its site energy but
11 its system energy. And when I see that there are numerous
12 gas-powered heat pumps online available, and actually some
13 marketing for them, that's a problem because we need to go
14 to all-electric heat pumps. One of the reasons is the
15 system energy. Delivering gas actually takes a lot of
16 energy powering pumps in the distribution system, power and
17 compressors.

18 And if we're not looking at the total site, at
19 the total system energy demand, then we're missing a key
20 component. We are after all at this critical phase where
21 we need to maximize the renewable energy electricity, and
22 we need to minimize the fossil fuel-based energy. And if
23 we're not minimizing the system energy we are creating
24 demands on the electrical supply to generate more carbon
25 dioxide. And that does not make sense for so many reasons

14

1 as other people have mentioned. Thank you.

2 MS. BADIE: Thank you.

3 Next, we have Gabe G. Gabe, I'm going to open
4 your line, please spell your name for the record, announce
5 any affiliation. We're asking for comments to be two
6 minutes or less.

7 MR. GOFFMAN: Hello, G-A-B-R-I-E-L Gabriel,
8 Goffman G-O-F-F-M-A-N. I'm also a member of the San
9 Francisco Climate Emergency Coalition. And I'm also
10 calling to ask that we adopt a mandatory zero emission and
11 new construction standard statewide. Gas is a major
12 climate emission, and it's also a major pollutant in a lot
13 of homes. And it has a lot of negative impacts.

14 We keep on adding more gas customers, and it's a
15 huge source of our consumption. When we build new homes
16 and buildings with gas appliances and HVAC equipment we're
17 really hurting our climate goals and hurting public health.
18 I really would like just to reduce our emissions. It's a
19 long-term goal. And I think it can really spur the globe
20 really to reduce emissions in terms of equity, of
21 pollutants, and in particular NOx that escape buildings
22 through direct and indirect air, ventilation, and
23 combustion devices. And negatively impacts poor
24 neighborhoods in particular, but it does impact all of us.

25 This could avoid a lot of deaths and could save

15

1 billions of dollars in health savings annually. So I think
2 it's an easy step to make. And I think once we do it, it
3 can really spur cost reductions and improvements in the
4 possibilities. Yeah, so I think this is something we could
5 all embrace and do. Thank you.

6 MS. BADIE: Thank you.

7 That concludes public comment. Back to you,
8 Chair.

9 CHAIR HOCHSCHILD: Okay. Well, thank you all for
10 those comments.

11 And I just want to begin by thanking and
12 congratulating Commissioner McAllister and the entire
13 Energy Commission team for a spectacular Building
14 Electrification Summit. Over the course of two days last
15 week, we had -- were sold out. We did this in concert with
16 the Electric Power Research Institute. Had local
17 government, environmental groups, entrepreneurs,
18 innovators, Chair of the Air Resources Board, President of
19 the Public Utilities Commission, Marth Guzman from the EPA,
20 representatives from DOE, and many, many others. They're
21 really digging into the details of how we're going to reach
22 this 6 million electric heat pump goal, decarbonize our
23 buildings, and improve air quality.

24 And I just couldn't be prouder of the whole team.
25 And especially, I just want to thank Commissioner

1 McAllister for his leadership. And for hiring so well,
2 most especially Bryan Early, his fantastic Advisor who
3 really was the maestro of the event. And thanks to
4 everyone on the team for pulling together to make that such
5 a success. We're going to be doing it again and I think
6 momentum is definitely building in this area.

7 I also just wanted to acknowledge it's been a
8 heartbreaking week, a heartbreaking two weeks with the
9 events in the Middle East. And I think these moments
10 really call upon us to dig deep and see the humanity in all
11 of us.

12 I am German-Jewish on my father's side. I have
13 relatives in Israel, in Yehud, that I met for the first
14 time when I did a visit to the Palestinian territories into
15 Israel about five years ago as part of the Renewable Energy
16 Delegation. They're safe, but they're terrified and
17 they're grieving for both Israel and the Palestinian
18 people. And our hopes are for peace and for justice in the
19 region. And our hearts go out to all the innocent people
20 who have perished in this heartbreaking time.

21 So I just wanted to share that. And then open it
22 up for any other Commissioners who would like to share any
23 thoughts or make any announcements. And I can't see you,
24 so just go ahead and speak.

25 COMMISSIONER MONAHAN: Thanks, Chair. And I

1 really appreciate those remarks.

2 And I just want to say on a personal level, I too
3 am feeling this very acutely. My family is Jewish. My
4 kids are Jewish. And we have a lot of family members on my
5 husband's side that are in Israel. And I just want to
6 emphasize this importance of coming together. That there's
7 no place for antisemitism and there's no place for anti-
8 Palestinian racism. That this is a moment that we need to
9 look, as the Chair said, to each other's humanity.

10 And violence against innocent people, against
11 children, against families that are civilians, it's just
12 heartbreaking. And I think we're all feeling that. And my
13 hope for the Energy Commission and for California writ
14 large is that we are a place that welcomes everyone. That
15 we embrace differences. That we really try as much as we
16 can to support each other, and especially in these really
17 challenging times.

18 18:07

19 CHAIR HOCHSCHILD: Thank you. I can't really see
20 anyone, so anyone in the room, just go ahead and speak with
21 anything else to add.

22 CHAIR HOCHSCHILD: Thank you. I can't really see
23 anyone, so anyone in the room just go ahead and speak if
24 you have anything else to add.

25 COMMISSIONER MCALLISTER: This is (indiscernible)

1 --

2 VICE CHAIR GUNDA: Chair, thank you so much.

3 This is -- I just wanted to appreciate your
4 comments and Commissioner Monahan's comments. I think I
5 want to limit my comment to just making sure -- it's really
6 hard to really discuss the extraordinary sadness and the
7 tragedy that's happening right now. So I don't want to
8 necessarily expand on that any further than you both did
9 beautifully.

10 But I do want to make sure that we as the CEC, as
11 an institution, make sure that we are here for our CEC
12 family of staff. I know we've heard from different
13 perspectives within the agency. And I just want to make
14 sure that every one of us feel welcome in this place and
15 know that we're here to hear you and support you and be
16 there for you. So I just want to leave it there. Thank
17 you.

18 CHAIR HOCHSCHILD: Thank you.

19 Commissioner McAllister.

20 COMMISSIONER MCALLISTER: Yeah, I really don't
21 have words to say any -- even approach your articulus or
22 Commissioner Monahan's. But it really just -- there's
23 emotions that just don't, I think I don't experience very
24 often. And what's going on and the sort of -- just the --
25 that level of violence. And just it takes us to a place

19

1 that is foreign to many of us, I think, since we have lived
2 in peaceful times for much of our lives.

3 And so I just want to express sympathies,
4 reiterate sympathies that you expressed. And just really
5 hold tight to one another and try to find the best and
6 amplify that. That's the way we combat violence. Thank
7 you.

8 CHAIR HOCHSCHILD: Thank you.

9 Commissioner Gallardo.

10 COMMISSIONER GALLARDO: Yeah, Chair, I do have an
11 announcement to make on a different note. Do you want me
12 to comment?

13 CHAIR HOCHSCHILD: Yeah.

14 COMMISSIONER GALLARDO: Buenos Dias, good
15 morning, everybody. For those of you who haven't heard me
16 talk before this is not my normal voice. So I am losing
17 it, so I'm going to try to minimize what I say. But I do
18 think it is important to speak at this point.

19 We do have staff who are Palestinian, Israeli,
20 Jewish, Muslim, and all sorts of other ethnicities and
21 backgrounds, and religions. And so we definitely need to
22 embrace each other, as everybody's saying. So internally,
23 we try to do that at the Energy Commission. And then
24 externally, we do as well.

25 One of the ways that we do that is through the

1 annual Clean Energy Hall of Fame Award ceremony that we
2 have. So I wanted to announce that today that we are
3 having the ceremony December 7th. I hope that all of you
4 can be with us that day, so that we can celebrate unity and
5 diversity and embrace each other.

6 It's going to be at the CNRA Auditorium in
7 person. We will also have a hybrid portion so that folks
8 can join us if they can't be there in person.

9 And I also wanted to make the announcement of the
10 winners. We have an amazing selection committee who
11 decided on six incredible people who will be our 2023
12 winners. So for our Lifetime Achievement Award we have
13 Cliff Rechtschaffen, who retired from full time public
14 service. But recently was appointed to the California Air
15 Resources Board, so he's doing that as a part time job.

16 And then we have our Youth Game-Changer, who's a
17 student at Stanford University right now. But she's been
18 an activist fighting climate change and improving her
19 schools since high school, Ava Acevedo.

20 And we have our Tribal Champion Linnea Jackson,
21 who is the General Manager at the Hoopa Valley Public
22 Utilities District. She's part of the Hoopa Valley Tribe
23 living in Hoopa, California. And just is a great champion
24 for that entire community and the entire region.

25 And then we have three Clean Energy Champions.

1 The first one is a teacher from Calexico High School down
2 south in the Salton Sea region. That's Keith Fisher.

3 And then we have another Clean Energy Champion,
4 who is -- sorry, excuse me -- who is from the Southern
5 California area. He's a faith leader. And he goes all over
6 Southern California talking about the connection between
7 faith and clean energy, and teaching communities how to do
8 better on that. So that's Reverend Frank Jackson, Jr.

9 He's the Chairman, Chief Executive Officer of
10 Village Solutions Foundation, and the Chairman Council of
11 Presidents at New Mount Pleasant Missionary Baptist Church.
12 So we put Inglewood and Irvine as his areas, but he's all
13 over Southern California.

14 And then our final Clean Energy Champion is a
15 principal and thought leader at IDEAS Consulting. He
16 founded that company. That's David Kaneda. He's from the
17 San Jose area. And he's leading the charge on a lot of
18 different types of housing, incorporating clean energy and
19 is doing incredible work.

20 So join me in applauding these six winners, who
21 are doing a lot of great work to advance clean energy and
22 create a clean energy future for all of us throughout
23 California.

24 CHAIR HOCHSCHILD: Well, thank you so much,
25 Commissioner. And I think --

1 COMMISSIONER GALLARDO: And then we'll celebrate
2 them at the ceremony December 7th. I hope you all can join
3 us.

4 CHAIR HOCHSCHILD: Great, yes.

5 I think just tying these two strands together, I
6 think when these tragic events happen as they have the last
7 10 days or so, in the Middle East and elsewhere, it's
8 important to grieve. It's important to come together and
9 support each other. But also important to keep going, and
10 making positive things happen in the world. And that's
11 what the Energy Commission is about.

12 And this event that you have really led so
13 beautifully since it began is a great example of that. And
14 I really encourage everyone to attend in person. It's just
15 always an inspiration. Our media team does a wonderful job
16 putting together short documentary videos with each of
17 their stories, and just an inspirational highlight. That
18 event is free and open to the public. So really encourage
19 everyone to join.

20 So today we're going to be seeking to approve
21 over \$19 million of investments and keeping the innovation,
22 clean energy innovation momentum going.

23 But now I'd like to invite Brady Borcharding, who
24 is the Director of the Energy Commission's Office Of
25 Government And International Affairs, to give us a brief

23

1 legislative update. We just finished a very fruitful and
2 productive legislative session. I also just want to thank
3 Brady who joined right after getting married in August, and
4 has just brought incredible professionalism and energy and
5 dedication to the work, and just to be able to have you on
6 the team. So, Brady, over to you.

7 MR. BORCHERDING: Thank you so much, Chair. Good
8 morning. I think everyone can hear me. Great. Okay.
9 I'll cover these pretty quickly. I know we've got a busy
10 agenda today. But this is just a high-level overview of a
11 key selection of bills this regular session that have
12 passed that we were watching here at the Commission. Next
13 slide.

14 So as you can see California is not shy with
15 legislating. There were over 3,000 bills and motions and
16 everything introduced this year during the session. That
17 includes a special session that concluded at the beginning
18 of the year, which many of us here are familiar with
19 because it resulted in Senate Bill X1-2, which relates to
20 the Division of Petroleum and Market Oversight. Which Tai
21 Milder, our new Director, was appointed in August. And that
22 is something that is ongoing with implementation today.

23 But the CEC had over 100 bills that we were
24 looking at over the course of the year, or 200 rather,
25 analyzing 100, and then ultimately providing enrolled bill

24

1 reports at the Governor's Office to the tune of about 26.
2 But these 7 that we'll cover today are just I think the
3 ones that are maybe the highlights of the end of the
4 session and ones relating to I think some of the
5 Commission's priorities from this year. Next slide.

6 So specifically, to be in the offshore wind
7 conversation, Ab 3 -- and just to preface this actually
8 before we get into the bills. If any of the Commissioners
9 want to jump in and provide comment on any of these, please
10 go ahead. I'm happy to stop otherwise, we can wait till
11 the end.

12 AB 3 by Assemblymember Zbur relates specifically
13 to offshore wind. Asking the Commission on the heels of
14 the 525 Report, which we will be putting out soon, to
15 develop a sort of second phase plan and strategy related to
16 sea port readiness as we build out the pipeline for
17 offshore wind.

18 And then in addition to coordinate with Workforce
19 Development Board around making sure that a lot of that
20 construction in the parts for the offshore wind development
21 can be built, and assembled here in the state with the
22 percentages you see there, about 50 percent being
23 assembled in the state and 65 percent being manufactured in
24 the state. And that's a feasibility report that we'll look
25 at and provide back to the Legislature at the end of 2027.

25

1 Next slide.

2 And then very importantly, and very much in
3 Commissioner Monahan's wheelhouse, was a massive win this
4 year for the Commission and the Administration in general
5 and clean energy in the state I would say, is AB 126 by
6 Assemblymember Reyes and really the entire Legislature
7 involved in this bill. This is also colloquially known as
8 AB 8 Reauthorization. But it importantly provides the
9 reauthorization to raise funds off various vehicle fees,
10 for us to provide grants for clean energy and specifically
11 clean transportation funding. Notably in this bill there -
12 - it's green on the screen -- but there's about \$173
13 million annually that will come from this reauthorization.

14 And then additional prescribed parts of this bill
15 relate to hydrogen funding and stations, and how we will
16 administer that funding going forward. Especially with
17 preferences for siting those facilities in disadvantaged
18 communities to provide access where there might be
19 inequitable access currently.

20 And then additionally, requirements for how we
21 look at EV charging. And uptime requirements to ensure
22 that that network is also available and reliable for the
23 public. Next slide.

24 COMMISSIONER MONAHAN: Can I provide color
25 commentary?

1 MR. BORCHERDING: Yeah, absolutely.

2 COMMISSIONER MONAHAN: I just wanted to thank
3 you, Brady, because you played a really pivotal role in the
4 last minute back and forth on this bill. It was quite a
5 nail biter to the bitter end, and you were right there the
6 whole time.

7 I also want to say Kat Robinson; the Chair's
8 Chief of staff, Sarah Lim; my Chief of Staff, were all
9 deeply involved. And Hannan Rasul and his team. There was
10 a lot of negotiations that were happening at the very last
11 minute. A lot of responses that need to be made right
12 away. Linda Barrera and her team in the Chief Counsel's
13 Office played a critical role.

14 And just there was a lot of folks involved in
15 getting to this place where we had reauthorization. And I
16 mean we had great champions in the Legislature for this
17 program, but it was just a nail biter to the end. And so
18 thank you.

19 And I also want to acknowledge I mean, this was a
20 multi-year process. (Indiscernible) your predecessor
21 played a role in this. This has been a long journey, and
22 very satisfying that at the 11th hour we did it.

23 MR. BORCHERDING: Absolutely, I couldn't agree
24 more. And also thank you to the many program staff and FTD
25 who were on call the day of that hearing that we thought we

1 were going to have a lot of cross-examination with the
2 Legislature. And it turned out to be a pretty smooth
3 sailing. So it's always good to see policy come together
4 like that, especially with the 10-year reauthorization, and
5 the amount of funding that this will provide. Next slide.

6 1373 up on the board here, another big win for
7 the Commission and the Administration specifically around -
8 - well this bill is known as sort of a central procurement
9 function piece of legislation that establishes among other
10 things -- it's pretty beefy bill -- but more stringency on
11 the requirements of meeting the IRPs for all load serving
12 entities in the state. It requires the PUC to have greater
13 oversight of those load serving entities to make sure they
14 are meeting those requirements. And gives a mechanism for
15 penalties to be assessed and then those funds to be
16 reinvested.

17 But additionally, it looks at giving the CPUC
18 authorization to exercise this central procurement
19 function, which is now nested within the Department of
20 Water Resources. It gives public utilities the option of
21 also joining that ability to procure through DWR, to
22 provide essentially the lowest cost basis for those
23 resources that have to be sort of long lead time diverse
24 and clean. In this case really targeted towards the
25 development of offshore wind, and making sure there's a

1 stable sort of environment in which we can start building
2 those projects.

3 Yeah, moving forward. SB 48 Becker, relating to
4 some work that Commissioner McAllister has been working on.
5 And it's certainly on the heels of the Electrification
6 Summit, which was so successful this last couple of weeks.

7 This bill is really going to help us advance how
8 we look at building decarbonization and emission scoring in
9 buildings. But also provides us the necessary guardrails
10 and guidelines about how we do that in a way that is
11 equitable, prevents displacement, and really looks at the
12 best way of calculating how we look at emissions
13 reductions, in buildings, in the state.

14 And then another bill that was not - sorry, next
15 slide. This bill while not directly in the Commission's
16 wheelhouse is important, I think to highlight here. It was
17 one that we were watching, but is one that is more in the
18 Air Resources Board's domain. This bill by Senator Wiener,
19 SB 253, sort of received some national attention this last
20 month. As it is sort of the first of its kind to require
21 companies at the state level to do emissions reporting on
22 their activity. And in this case it tasks CARB with
23 collecting information on companies: scope 1, 2, and 3
24 emissions, starting in 2026.

25 And so this is one of these bills where

1 California is really stepping out in front of a lot of
2 policy in the country. And getting both praise and
3 criticism for it, but certainly in the direction of where
4 we want to be, which is accountability in emissions and
5 especially emissions reporting. Next slide.

6 SB 286, again with a big theme this year was
7 offshore wind policy, which is great for us here at the
8 Commission. You know, specifically this bill is really
9 looking at consolidating the permit process for these
10 developments. It is creating a working group to understand
11 the impacts on fisheries that offshore wind development
12 might have on the North Coast. And making it clear that in
13 the CEQA process, the State Lands Commission will take the
14 lead. This obviously also gets wrapped up into much of the
15 work the Commission is doing on 525 reporting, and then the
16 work to come next year.

17 And then the last bill also on transmission, is
18 really sort of a good governance bill by Senator McGuire
19 asking the CEC to make sure that we're coordinating with
20 the other two energy agencies, the PUC and the CAISO, to
21 make sure that we're on the same page. Particularly with
22 our MOUs and planning every five years.

23 And then additionally to create sort of this, I
24 think it's called a guidebook or a permitting handbook
25 rather, for how some of these projects will be done in

1 coordination with these agencies. Sort of another way of
2 providing transparency to developers to make sure that we
3 can meet our goals with development.

4 And I think that's it. I just want to thank the
5 Administration and thank the colleagues and our sister
6 agencies for the work that they did this year in
7 conjunction with us to make sure that we had all these wins
8 this year.

9 CHAIR HOCHSCHILD: Brady, one really one quick
10 question for you. What was the Weiner bill that required
11 disclosure on carbon emissions? Can you quickly recap?

12 MR. BORCHERDING: Yeah, SB 253. So it was --
13 Yeah.

14 CHAIR HOCHSHCILD: Yeah.

15 (Overlapping colloquy.)

16 MR. BORCHERDING: Yeah, this bill will require
17 CARB to eventually enforce the collection of scope 1, 2 and
18 3 emissions reporting from companies that do more than a
19 billion dollars' worth of revenue in the state. And also
20 public institutions with the exception of (indiscernible).

21 CHAIR HOCHSCHILD: When does that go into effect?

22 MR. BORCHERDING: 2025.

23 CHAIR HOCHSHCILD: 2025. So a year and change?

24 Okay.

25 MR. BORCHERDING: Yeah, I think January 1, 2025

1 is when it becomes effective. And I think the reports are
2 then due after that. There's also a threshold for
3 companies of a half a billion dollars in size to report a
4 different set of emissions.

5 CHAIR HOCHSCHILD: Okay, super helpful. Thank
6 you, Brady.

7 Colleagues, any questions or comments for Brady?

8 COMMISSIONER MCALLISTER: I just really want to
9 thank you, Brady, for jumping in. And just coming up to
10 speed super-fast and just providing a lot of value in this
11 Leg session. The sort of trial by fire, you kind of came
12 in in the middle of it and really show your showed your
13 stuff. So I really appreciate this and just all the work
14 behind it.

15 CHAIR HOCHSCHILD: Great. Okay. Unless there's
16 other comments (indiscernible).

17 VICE CHAIR GUNDA: I just wanted to, on the last
18 transmission MOU that was codified, just I wanted to
19 acknowledge the work that was done by Commissioner
20 Rechtschaffen, Elliot Mainzer and the CEC on really helping
21 move that. So I just wanted to acknowledge the work that
22 the CAISO, CEC, and CPUC has done collectively.

23 CHAIR HOCHSCHILD: Great. Unless there is other
24 Commissioner comments we'll turn now to Item 3, and we'll
25 take public comment on Item 3.

1 MS. BADIE: Thank you, Chair.

2 This is Mona Badie, the Public Advisor the
3 California Energy Commission. The Commission now welcomes
4 public comment on Item 3, the Consent Agenda. And first
5 I'll look at the QR code for folks in the room. And also
6 look for any hands. I don't see anyone, so I'm going to
7 transition to Zoom now.

8 If you're on Zoom and would like to comment on
9 Item 3, please use the raise hand feature on your screen if
10 you're online. It looks like an open palm at the bottom of
11 your screen. And if you're joining us by phone, you'll
12 press *9 to raise your hand and let us know you'd like to
13 make a comment.

14 And I'm just giving that a moment here. All
15 right, not seeing any raised hands for Item 3. Back to
16 you, Chair.

17 CHAIR HOCHSCHILD: Okay, thank you.

18 I have a recusal I'd like to read. At this time
19 I will recuse myself from any discussion, consideration,
20 and vote on the proposed resolution for Item 3(b), the
21 \$100,000 in membership fees for Veloz. I'm currently a
22 member of the Public Policy Board of Veloz representing the
23 Energy Commission. In that role, I do not make decisions
24 on behalf of Veloz. Together with my colleagues on the
25 non-voting Public Policy Board we lend policy guidance and

1 support to the Board of Directors.

2 Additionally, I do not receive any compensation
3 in any form including reimbursements or per diem for
4 expenses. So there's no financial interest in which there
5 would be a conflict of interest under the Political Reform
6 Act or the Warren-Alquist act.

7 However, in an abundance of caution, I will
8 recuse myself from the discussion vote on this item in
9 order to avoid any perception of conflict of interest. I
10 will leave my seat and have Vice Chair Gunda facilitate the
11 vote for Item 3(b) and then return for the remainder of
12 Item 3. So Vice Chair, over to you.

13 VIEC CHAIR GUNDA: Yeah, thank you, Chair.

14 Unless there's any Commissioner discussion for
15 this item, Commissioner Monahan, would you like to move?

16 COMMISSIONER MONAHAN: I move this Item.

17 VICE CHAIR GUNDA: Commissioner Gallardo.

18 COMMISSIONER GALLARDO: I second.

19 VICE CHAIR GUNDA: We will take the vote now.

20 Commissioner Monahan.

21 COMMISSIONER MONAHAN: Aye.

22 VICE CHAIR GUNDA: Commissioner Gallardo.

23 COMMISSIONER GALLARDO: Aye.

24 VICE CHAIR GUNDA: Commissioner McAllister.

25 VICE CHAIR GUNDA: I vote aye as well. The vote

1 goes 4-0 and can we have the Chair move back to the dais,
2 please.

3 CHAIR HOCHSCHILD: Okay, thank you, Vice Chair.

4 I'm back. We will now take Item 3(a) and 3(c)
5 through (e). Unless there's further commissioner
6 discussion, Vice Chair Gunda, would you be wanting to move
7 those items?

8 VICE CHAIR GUNDA: Yeah, move items noted.

9 CHAIR HOCHSCHILD: Is there a second from
10 Commissioner Monahan?

11 COMMISSIONER MONAHAN: I second.

12 CHAIR HOCHSCHILD: All in favor say aye. Vice
13 chair Gunda.

14 VICE CHAIR GUNDA: Aye.

15 CHAIR HOCHSCHILD: Commissioner Monahan.

16 COMMISSIONER MONAHAN: Aye.

17 CHAIR HOCHSCHILD: Commissioner Gallardo.

18 COMMISSIONER GALLARDO: Aye.

19 CHAIR HOCHSCHILD: Commissioner McAllister.

20 COMMISSIONER MCALLISTER: Aye.

21 CHAIR HOCHSCHILD: Thank you. Those Items -- and
22 I vote aye as well. Those Items pass unanimously.

23 We will turn now to Item 4, Information Item on
24 the Department of Water Resources Update on the Strategic
25 Reliability Reserve Investments. Welcome to Delphine to

1 present.

2 MS. HOU: Great, thank you very much. I'm just
3 doing a check on the audio. Excellent.

4 Well good morning, Chair, Vice Chair,
5 Commissioners. My name is Delphine Hou, Deputy Director of
6 the Statewide Water and Energy Office with the Department
7 of Water Resources. Thank you for having us back here and
8 providing an update on the Electricity Supply Strategic
9 Reserve -- Electricity Supply Reliability Reserve Program,
10 lots of Rs and Ps in there. Next slide, please. Oh, maybe
11 one more slide after that. There we go. Fantastic.

12 As we all know AB 205 created the state strategic
13 reliability reserve. CEC as well as the DWR all have a
14 hand in it. And as part of the three parts, CEC oversees
15 two on demand response and distributed resources, whereas
16 DWR's program is focused on grid connected resources.

17 So the Electricity Supply Strategic Reliability
18 Reserve Program, we act as an insurance policy, and
19 safeguard the statewide electric grid during extreme and
20 combined events. And as we all know we've seen those large
21 heat events, wildfires, droughts, etc., driven by climate
22 change. But in doing so we are here to support
23 California's transition to a clean energy future. Next
24 slide, please.

25 So per AB 205, DWR is required to provide regular

1 updates to the Energy Commission at a business meeting for
2 investments made and under consideration. It also requires
3 attendance by the CPUC and the CAISO. And a representative
4 from each entity is in attendance today virtually online,
5 so thank you for their participation. Today is the fourth
6 update presented to the Commission by DWR and we expect the
7 next update to occur in the first quarter of 2024. Next
8 slide, please.

9 And as I've presented before there are five
10 distinct projects under the Program. The first one is an
11 extension of generating resources plan for retirement. The
12 second one are new temporary power generators of 5
13 megawatts or more. The third type are generating
14 facilities using clean zero emission fuel technology. The
15 fourth are new energy storage systems of 20 megawatts or
16 more, that can have at least 2 hours of discharge at
17 minimum. And then the fifth is to reimburse electrical
18 corporations for the value of imported energy or import
19 capacity products for their above market costs.

20 So part of our project selection criteria is
21 driven by bringing available megawatts to the grid as
22 quickly as possible. And prioritizing investments that do
23 not compete with generating facilities already planned for
24 development by load serving entities, and public utilities.
25 And as we've discussed in prior meetings, and in other

1 forums, there is a lot of activity from the load serving
2 entities and public utilities to meet their ultimate SB 100
3 goals. So we want to be very careful about that. Next
4 slide, please.

5 So just as a preference this actually has not
6 changed from the last time I presented, so we're in
7 somewhat of a steady state. But this just gives you a
8 snapshot from '22 through '24. And I'll focus actually on
9 the 2023 line.

10 So currently we have up to 147 megawatts of
11 emergency and temporary generation that was available this
12 summer. But we are under construction for another 143.5.
13 So that brings you to the total of 291 megawatts that is
14 shown on the first top line. For once through cooling I'll
15 talk about that in the 2024 section.

16 But for the firm energy imports there was
17 authorization provided to DWR this year to procure up
18 through October 31st, 2023. And that was really to protect
19 against if we were to have a fairly extreme wildfire and
20 extended wildfire season as we've seen in the past.
21 Luckily, we are not in that position this year, so we are
22 slowly winding that that down. And we'll have more numbers
23 in the future. But we've been working closely with
24 electrical corporations and have been able to secure
25 imports throughout the summer.

1 And then lastly, as we mentioned before, DWR has
2 closed the Temporary Diesel Generator Program early in
3 favor to look at other technologies. So there was nothing
4 in that category.

5 As I mentioned for 2024, we have the original 291
6 rolling over from 23 into next year. But also critically
7 the once through cooling resources. That 2,800 megawatts
8 contract starts January 1st, 2024. And again, as we noted
9 before, those resources are pulled out of the resource
10 adequacy market. And they will be off unless and until
11 needed per coordination with the CAISO.

12 We are looking to supplement our emergency
13 generators with non-emitting resources. However, that has
14 been fairly challenging. And as I noted the load serving
15 entities are doing their best to meet their SB 100 goals.
16 So there is a lot of competition for things like batteries,
17 solar paired with batteries. But we're looking into
18 potential opportunities in the next few months. And we
19 hope to provide an update in our next briefing.

20 Lastly, I want to acknowledge the considerable
21 coordination and hard work of CEC staff, PUC staff, CAISO
22 staff, and of course the great DWR staff that I represent,
23 really coming together, working together under extremely
24 tight deadlines to maintain the State Strategic Reliability
25 Reserve.

1 So that concludes my presentation. Thank you
2 very much.

3 CHAIR HOCHSCHILD: Thank you so much, Delphine.
4 I really appreciate these updates. And Vice Chair, thank
5 you for getting those on the calendar and just staying
6 coordinated.

7 So Vice Chair, over to you for the discussion.

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

9 Delphine, I just want to begin by just saying
10 thank you. Thanks for leaving CAISO and joining DWR. We
11 just needed you on the state side a little bit more, so
12 just thank you. I kind of -- we just took a very difficult
13 vote to keep the OTC power plants on. And I think I want
14 to just remind ourselves, as a part of this that that's an
15 obligation that we set in motion that we will do everything
16 we can to obviate the need for those power plant
17 extensions.

18 And we had some clear kind of commentary from the
19 dais, and ask of the CEC staff to work with your team
20 closely on one, recognizing the conditions necessary for
21 the retirement of those plants. And how do we then put
22 that in motion. So I just wanted to reiterate the things
23 and the difficult vote on that, but also the importance of
24 making sure that we follow through on that issue.

25 Second, I also wanted to note that just the hard

1 work that your team is doing behind the scenes. That's not
2 always visible on some of the negotiations that you're
3 doing every single day trying to get the best deal for the
4 state in keeping the lights on. So obviously some of that
5 is sensitive, so I just want to leave it there. And just
6 comment how incredibly grateful I am to you and the STEP
7 team that closely works with you, our siting team that
8 works closely with you, Elizabeth Huber and everybody that
9 works in that Division.

10 Finally, I want to note a thanks to Pete. I
11 don't want to leave him out. There's the CPUC staff that
12 bring this consensus into union, and just making sure that
13 we're all in lockstep in making sure that we're doing the
14 best understanding the tradeoffs and unfortunate downsides
15 of the decisions were making in developing the Strategic
16 Reserve and continue to keep the lights on in California.

17 As a separate note, outside of where we are, I
18 just wanted to for public record share that we are now
19 doing the analysis on understanding how long we would need
20 a Strategic Reserve. So what would it look like in 2045?
21 Are we clear? So some of the things that we really tried
22 to do was incorporate better climate predictions, so that
23 we can do better procurement. And really procurement that
24 can support the climate volatility moving forward.

25 But even as we do that at some point there will

1 be a cost prohibitive rate increase that we have to figure
2 out what is the cutoff point. And beyond which how do we
3 support megawatts that might be needed in emergency and how
4 do we socialize those costs beyond the ratepayers?

5 So we have been talking through that. We think
6 preliminarily it's thousands of megawatts that we might
7 need through 2045 in something like a Strategic Reserve.
8 And our ambition and goal is to make that as clean as
9 possible and hopefully lean into demand flexibility. We
10 adopted that 7,000 megawatt goal earlier this year. And
11 CEC with our colleagues, both PUC, DWR and CAISO, we'll do
12 everything we can to make that composition of the Strategic
13 Reserve will be largely clean and something that we can
14 truly rely on.

15 So again, commend your work. Delphine, thank
16 you. You are being an absolute balanced hand for us and
17 then keeping things moving. So thank you.

18 MS. HOU: Thank you very much.

19 CHAIR HOCHSCHILD: Unless there's other comments?
20 Oh yeah, Commissioner Monahan, please go ahead.

21 COMMISSIONER MONAHAN: I'm going old school with
22 the raised hand. Well, I want to build on the Vice Chair's
23 comments and just say I think the only place that would be
24 better for the state of California than DWR is the CEC. So
25 just keep that in mind.

1 Yeah, I just really appreciate these updates.
2 And I wanted to highlight that the state is doing all we
3 can to speed up deployment of clean energy resources on the
4 grid. Nobody likes to make a decision around once through
5 cooling. We want those plants to retire as soon as
6 possible. So do you, we all do.

7 And to do that, we need to make sure that we have
8 enough clean energy resilience, so that we can feel
9 confident that we can keep the lights on and retire these
10 plants. So hard decisions all the way around. Just
11 appreciate you and DWR and all the work you're doing with
12 our team on this. But it's all hands on deck, and we need
13 to get those clean energy resources more swiftly deployed.

14 MS. HOU: I absolutely agree.

15 CHAIR HOCHSCHILD: Just before we leave this I
16 did want to highlight, even as we're doing all this short-
17 term work, there's some really pathbreaking opportunities
18 long term. And later today in the agenda we're going to be
19 adopting the very first flexible appliance standard in the
20 United States. This is for pool pumps, which represent
21 over 500 megawatts of demand in California. And then
22 there'll be more appliances to follow. And just a really
23 great reminder of the power of the demand side of the
24 equation, and the need to really lean into that. And that
25 is increasingly going to be a big part of the solution as

1 we look to firm up reliability.

2 So thank you so much, Delphine. And, Andrew, I
3 can't see if you had a comment. Oh, Commissioner Gallardo,
4 yeah, please go ahead.

5 COMMISSIONER GALLARDO: Thank you.

6 So Delphine, I wanted to thank you for yesterday.
7 I got to tour the Greenleaf and Roseville temporary
8 generator sites. And so that was really helpful for me to
9 see it firsthand. So thank you to you and your team and
10 STEP Division as well for coordinating that.

11 One of the things that I observed was Roseville
12 is doing a fantastic job on doing communication with
13 community using different types of mechanisms and methods
14 and being really proactive. So I also want to advocate for
15 that for the OTC situation. And I'm hoping that maybe we
16 can get an update on what's going on that front, on the
17 next round of updates you have for us.

18 And then anything we can do at the Energy
19 Commission to help out with that, I think, we'd be willing
20 to do within our legal parameters, of course. But I just
21 wanted to emphasize that I think that's really important.
22 Especially with the OTC situation in Oxnard and the
23 Wilmington areas.

24 MS. HOU: Understood. Thank you so much,
25 Commissioners. Well, thank you all very much for your kind

1 comments and really appreciate the collaboration.

2 VICE CHAIR GUNDA: CEC is hiring just to let you
3 know.

4 CHAIR HOCHSCHILD: Pete, were you going to say
5 something?

6 MR. SKALA: Yeah. I was just going to mention
7 that -- Pete Skala with the CPUC's Energy Division. I'm
8 here representing President Reynolds, who asked me to
9 express her appreciations. And I guess I'll just echo the
10 well-stated appreciations from the dais for the work that
11 DWR is doing. And I guess I might also make a plug that
12 perhaps the state will be best served if Delphine were on
13 the PUC team. (Laughter.)

14 MS. HOU: Thank you for your kindness as well.

15 CHAIR HOCHSCHILD: Thank you so much, Delphine.
16 Appreciate it.

17 MS. HOU: Thank you very much.

18 CHAIR HOCHSCHILD: All right, unless there's
19 further comments Item 5 will be taken up at a future
20 meeting. So we can turn now to Item 6, Order Instituting
21 Rulemaking Whole-House Home Energy Rating and Labeling.
22 And I welcome Will Vicent to present.

23 MR. VICENT: Good morning, Commissioners. Thank
24 you for having me. My name is Will Vicent. I am the
25 Deputy Director of the Building Standards here at the

1 California Energy Commission. And I've got the distinct
2 privilege of requesting permission to update our
3 regulations regarding California's whole house rating and
4 labeling program. Next slide, please.

5 So our Public Resources Code does direct the
6 Energy Commission to establish criteria for adopting a
7 statewide Home Energy Rating program for existing and new
8 residential dwelling units. And those regulations
9 currently reside in Title 20. They have not been updated
10 since 2009, so unfortunately do not reflect our latest
11 codes.

12 Our software and our implementation tools for
13 that program are out of date. And the landscape of energy
14 programs around this topic and tools have evolved
15 substantially since that time. Notwithstanding, there's a
16 very obvious growing interest in the topic of climate
17 action for consumers and others. And so we believe now is
18 the right time to update these regulations. Next slide,
19 please.

20 So to give an illustration of exactly what I'm
21 talking about this image is of a project in Irvine,
22 California. It's a newly constructed project of
23 condominiums that complies with the latest Energy Code,
24 which means it's got all the latest energy efficiency bells
25 and whistles. It has rooftop solar, it has heat pumps, and

1 most notably, it has zero onsite fossil fuel combustion in
2 this project.

3 However, a similar project across the street
4 without these features would be valued at the same amount
5 as this project. So any online real estate listing
6 applications or websites such as this one here has a good
7 breakdown of what the cost of ownership is on all those
8 pieces. And what's highlighted here is that there is no
9 information on utilities, even though utilities are often
10 the second largest expense for cost of operating and owning
11 home. So we intend to do something about that. Next
12 slide, please.

13 Fortunately for us this is not a new concept, and
14 there are places to learn from. In particular, we've got a
15 strong delegation with Denmark. The European Union has had
16 energy performance certificates for some time now, about
17 two decades. And specifically Denmark has had a program
18 since 2006. They have now roughly 1 million ratings and
19 environmental or energy performance certificates in a
20 database already, which constitutes a majority of their
21 single-family homes. And with that database they also
22 collect all this information and also provide
23 recommendations of energy efficiency upgrades.

24 So the image that you're looking there at on the
25 left is an example of one of these energy rating systems in

1 Denmark. It's in a different language obviously, but the
2 KR refers to Danish Krone. That image on the left is
3 indicating this home has an operating annual expense of
4 roughly \$4,000 or more. And of course again it says what
5 recommended actions can be taken there by consumers, which
6 is great on the right.

7 Because they do collect all this data they now
8 know that moving on their rating system from an F to an A
9 on average could have a market impact of over \$40,000, US
10 dollars. So that's the substantial market impact as a
11 signal for clean energy. Next slide, please.

12 So the benefits to reestablishing and
13 proliferating this program are substantial. One, it
14 provides complimentary signals to our already nation
15 leading Energy Code by encouraging compliance with the
16 Energy Code, because the resulting product will have market
17 value. It differentiates California's products, which are
18 already again are some of the best in the nation for
19 builders and developers who already have to do this stuff.

20 It provides clear targets for the building design
21 community, which are kind of overwhelmed right now with all
22 the different directions we're going.

23 It certainly complements the billions of dollars
24 in public subsidies that are coming from the state and
25 nationally.

1 And of course, most importantly, it starts to
2 empower consumers in this world of clean energy, which is
3 so dear to our hearts. Next slide, please.

4 So today, staff, CEC staff is requesting approval
5 to move forward with an order instituting rulemaking. And
6 if approved, that we will get working immediately on a
7 robust public process where we take in a lot of public
8 feedback and a lot of other learnings from others who have
9 done this. And this includes not only having public
10 workshops but establishing technical working groups to work
11 through the details because the details matter.

12 And if all goes well, we'll have a rulemaking
13 process in the calendar year of 2025 in alignment, if all
14 things go well with the latest update to California's
15 Energy Code on January 1, 2026. I'm here joined with our
16 Chief Counsel's Office for any questions you may have.
17 Thank you for your consideration.

18 CHAIR HOCHSCHILD: Thank you so much, Will.

19 All right. Let's go to public comment on Item 6.

20 MS. BADIE: Thank you. This is Mona Badie, the
21 Public Advisor at the California Energy Commission. The
22 Commission now welcomes public comment on Item 6. We have
23 multiple ways folks can let us know they'd like to make a
24 comment on this item.

25 The first is folks that are in the room. We've

1 asked for folks to use the QR code to notify us they'd like
2 to make a comment. But also if you are in the room and you
3 have not signed up for the QR code you can raise your hand,
4 I will look for those. We also have Dorothy Murimi from
5 the Public Advisor's Office in the back for anyone needing
6 assistance for this or any other item.

7 And let me check the QR code queue. All right,
8 we don't have anyone in the room. So I'm going to
9 transition to Zoom. If you're on Zoom and you'd like to
10 make a comment, please use the raised hand feature on your
11 screen, or press *9 if you're joining us via phone.

12 And we have one hand as of now. Shelby Gatlin,
13 I'm going to open your line. Please spell your name for
14 the record, announce any affiliation. And we're asking for
15 comments to be two minutes or less.

16 MS. GATLIN: Hello, good morning. This is Shelby
17 Gatlin with CalcERTS. Can you hear me?

18 MS. BADIE: Yes.

19 MS. GATLIN: Great. It's G-A-T-L-I-N. We are
20 happy to support the Commission with the work to assess the
21 Whole-House Home Rating Program. CalcERTS has long
22 partnered with the Commission on this program as an
23 approved provider. We've also supported the Commission at
24 looking at ways to improve the program.

25 During the 2019 Code Cycle, per the request of

1 the Executive Director we worked with CEC programmers and
2 subject matter experts to explore the use of CEC supported
3 modeling software to generate different home scores and
4 calculations. That work ventured into the complicated
5 issues of PV, TDV, climate zone discrepancies, modeling
6 challenges, all of that complicated work that that goes
7 into getting a home score.

8 We are working with the Commission to share the
9 data and our expertise and look forward to this rulemaking.
10 Residential Energy Efficiency has so many benefits. It's
11 one of those programs where everybody wins in many ways.
12 It helps homeowners and renters sacrifice less of their
13 income to utility bills. As Will said it empowers
14 consumers, and it helps us achieve our climate goals. We
15 look forward to working with Will and his team and the
16 Efficiency Division to assess what amendments to the whole
17 house program will be most effective. Thank you so much.

18 MS. BADIE: Thank you.

19 The Public Advisor's Office has also received a
20 comment to read into the record. This comment is from Bob
21 Raymer from CBIA. And he would like us to indicate that,
22 "CBIA supports approval of Item 6 on the agenda today.
23 CBIA looks forward to working with the Commission as they
24 move forward on this issue. And we are also very grateful
25 for the clarification regarding RESNET, R-E-S-N-E-T, use in

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1 California recently provided in the CEC blueprint. Thank
2 you."

3 And that concludes public comment. Back to you,
4 Chair.

5 CHAIR HOCHSCHILD: Okay, thank you, Mona.

6 Let's go to Commissioner discussion, starting
7 with Commissioner McAllister.

8 COMMISSIONER MCALLISTER: Well, thank you, Chair.

9 And thanks, Will, for that presentation, really
10 great level and content. And thanks Shelby for chiming in
11 with your support as well as today Bob, and the team there.

12 So this is a beginning point for revisiting and
13 updating. It's a very much needed update, as Will
14 explained, to the Whole-House Rating Program.

15 And I guess just a little context note. This
16 rating mechanism, it's an asset rating. And so it's based
17 on the physical characteristics of the asset. So it's not
18 like any particular household looking at energy bills and
19 sort of saying what that particular household could do for
20 the building. It's really sort of more generic than that.
21 And it's meant to be comparable, like to like. And it sort
22 of levels the playing field. It will level the playing
23 field between new construction and existing buildings.

24 And so it'll really provide a much more well-
25 ordered landscape for homebuyers to know what they're

1 getting into when they buy a home. And up to now, that
2 kind of price differentiation that Will explained that
3 exists in Denmark and across Europe, it really only exists
4 at the upper end of housing in California and most of the
5 US.

6 When you have a lot of bells and whistles and you
7 can say hey this is a green home, because it's got
8 whatever, these characteristics. Then that sort of can
9 result in a price premium. But the vast majority of the
10 marketplace just doesn't have those differentiating factors
11 even though the housing stock is incredibly diverse.

12 And so a well-designed program that we're aiming
13 to do with this rulemaking will, I think really provide
14 that that broad framework that can have a lot of traction
15 in the marketplace. And over time really get to where
16 we've seen it can go in a place that does it systematically
17 like Denmark.

18 Just in my recent trip to Denmark we saw that in
19 action. The A to F or A to G rating is understandable to
20 people. And at that opportunity when there's a change of
21 hands, a transaction, or a time certain of some sort where
22 there's a rating generated that actually goes out there and
23 does inform the marketplace. And so a direct investment
24 and it can really have a lot of a lot of positive impact,
25 and help us reach our decarbonization goals. And

1 particularly in new construction where by far the greatest
2 need actually is.

3 So I'm really looking forward to working with our
4 Danish counterparts. They're super supportive of this
5 obviously, and excited to pitch in with their knowledge.
6 They have done some pretty rigorous analysis of the market
7 impacts. And we're pretty clear that that this can have a
8 big upside.

9 So we've been monitoring the national discussion
10 on home energy ratings, looking to leverage the lessons
11 learned and updating California's rules. This has been
12 kind of on a side burner for too long really as we have
13 just so many pressing things to do in the Division. But
14 this really has gone up in profile and need just lately.
15 And so I think really it's a time to revisit this and
16 update it and really get it up to into the modern era where
17 we can actually implement a program like this and get the
18 traction and the upside that it has.

19 So we're taking this step to update the rules for
20 our voluntary program. But the effort will open up a
21 conversation for alignment with incentive programs and
22 potentially, you know, putting in place a more rigorous
23 program down the line. So really looking forward to taking
24 this first step and certainly appreciate all the
25 stakeholder support.

1 CHAIR HOCHSCHILD: Thank you so much,
2 Commissioner.

3 Unless there are other comments and again I can't
4 see everybody clearly, I would just welcome a motion from
5 Commissioner McAllister on Item 6.

6 COMMISSIONER MONAHAN: Chair. Chair.

7 CHAIR HOCHSCHILD: Yeah, so do you have comments?

8 COMMISSIONER MONAHAN: Yeah, just really quickly.

9 Just I want to congratulate Commissioner
10 McAllister and the whole team that's been working on this.
11 The idea of really understanding from a very simple rating
12 system the energy efficiency of your home just seems super
13 powerful. As somebody who lives in a leaky old house I
14 would like it. I think the applicability is better for
15 maybe new homes, but for old homes I'm assuming that this
16 rating system would also cover them as well. Is that true?

17 MR. VICENT: That's correct.

18 COMMISSIONER MONAHAN: So just -- it's just, I
19 feel like on all the building decarbonization work that
20 we're doing writ large. It's like we're trying to
21 electrify. We're trying to make sure that lower-income
22 families can benefit. We're trying to increase the
23 stringency of our Building Code. We're trying to make
24 tools that will make it easier for us to understand the
25 efficiency of building.

1 So I just want to congratulate the whole team
2 that's been working on this. I feel like it's really
3 pushing the envelope, building envelope, so to speak. And
4 very powerful opportunities here.

5 COMMISSIONER MCALLISTER: Thanks, Commissioner
6 Monahan. And I'll totally agree.

7 And part of the point of this or really two main
8 points. One is to level the playing field between new and
9 existing so that the same scale can apply to all of them.
10 So that it doesn't sort of implicitly disadvantage the new
11 construction, which the Building Code ensures that those
12 will be high performing. But the existing building stock
13 really is hard to hard to get your grip on if you're a
14 potential homebuyer. So having a consistent scale is
15 really important.

16 And then having a scale that's understandable.
17 The current system has this kind of counterintuitive 100 to
18 0 rating system that lower is better, and it's not really
19 that replicable. So the sort of a grading system that is
20 understandable and just intuitive to people is really
21 important. And I think that's part of what will get this
22 traction over time.

23 And so we're going to be really leaning on
24 stakeholders and experience across the globe to develop
25 that kind of labeling system that's really going to work.

1 So I'll move Item 6 if there are no other
2 comments.

3 VICE CHAIR GUNDA: Yeah, I just wanted to provide
4 a quick 10 seconds. I just wanted to say thank you
5 Commissioner McAllister, to your continued leadership on
6 building efficiency and decarbonization.

7 And I also wanted to just note, Will, that was a
8 really good presentation. Kind of really laying out the
9 problems statement, the opportunity, and then what can be
10 done. So I also want to take this opportunity to
11 congratulate you on your enhanced role in the Efficiency
12 Division. I look forward to supporting you and the staff.
13 And good work on your part and the entire efficiency team
14 on getting this started. Thank you.

15 COMMISSIONER MCALLISTER: My last comment I will
16 just say to leverage your comment just now. Part of the
17 reason we can engage on this and get it done alongside
18 everything else is that we have such an amazing team. And
19 Will is sort of the top of that part of the Division. Mike
20 leads the Division, Will is really leading on our building
21 codes and enforcement and just a whole slew of issues
22 including this one. And so really just creating a team
23 that that can get this done and has the expertise and the
24 bandwidth is the what the reason we can do this. So thank
25 you to Will and the team.

1 CHAIR HOCHSCHILD: I heard a motion from
2 Commissioner McAllister on Item 6. Commissioner Gallardo,
3 would you be willing to second?

4 COMMISSIONER GALLARDO: I second.

5 CHAIR HOCHSCHILD: All right, all in favor.
6 Commissioner McAllister.

7 COMMISSIONER MCALLISTER: Aye.

8 CHAIR HOCHSCHILD: Commissioner Gallardo.

9 COMMISSIONER GALLARDO: Aye.

10 CHAIR HOCHSCHILD: Vice Chair Gunda.

11 VICE CHAIR GUNDA: Aye.

12 CHAIR HOCHSCHILD: Commissioner Monahan.

13 COMMISSIONER MONAHAN: Aye.

14 CHAIR HOCHSCHILD: And I vote aye as well. Item 6
15 passes unanimously. Thank you so much, Will, and congrats
16 on the progress.

17 We'll turn now to Item 7, Equitable Building
18 Decarbonization Direct Install Program Guidelines. Welcome
19 to Diana Maneta to present.

20 MS. MANETA: Thank you Chair, Vice Chair and
21 Commissioners. My name is Diana Maneta, and I am in the
22 Existing Buildings Branch of the Efficiency Division. And
23 I'll be presenting the proposed guidelines for the
24 Equitable Building Decarbonization Direct Install Program
25 this morning.

1 I'd like to start by thanking our Lead
2 Commissioner Andrew McAllister for his leadership and
3 active engagement in the development of these guidelines.

4 This has been a joint effort between the Efficiency
5 Division and the Reliability, Renewable Energy &
6 Decarbonization Incentives or RREDI Division, and I want to
7 acknowledge my many colleagues in both divisions who have
8 contributed to this effort.

9 I also want to acknowledge the individuals and
10 organizations who submitted comments on the draft
11 guidelines or participated in one of our public workshops
12 or listening sessions. Their thoughtful input really
13 guided -- shaped the guidelines that are before you today.
14 Next slide, please.

15 The CEC was directed by Assembly Bill 209 in 2022
16 to create the Equitable Building Decarbonization Program.
17 The program will have numerous benefits to Californians.
18 It will reduce greenhouse gas emissions from existing
19 buildings, thereby helping to avoid the worst impacts of
20 climate change and contributing to California's goal of
21 carbon neutrality by 2045. It will advance energy equity
22 by directing benefits to low-income households,
23 disadvantaged and low-income communities, and tribal
24 communities.

25 It will also improve resiliency to extreme heat,

1 air quality, and energy affordability, support grid
2 reliability, and support the creation of local, good-
3 quality jobs in participating communities. Next slide,
4 please.

5 Building decarbonization means reducing or
6 eliminating greenhouse gas emissions from buildings through
7 strategies such as replacing gas appliances with efficient
8 electric appliances and making buildings more energy
9 efficient.

10 In addition to reducing greenhouse gas emissions,
11 these upgrades can also make buildings safer, more
12 comfortable, and more affordable to heat and cool.

13 However, there are significant challenges to decarbonizing
14 buildings. These include the cost of the upgrades needed,
15 split incentives between landlords and renters, workforce
16 availability, and infrastructure constraints, particularly
17 electrical capacity in buildings.

18 These challenges are especially acute in low-
19 income, disadvantaged, and tribal communities, the very
20 communities that are most in need of building upgrades as
21 they often bear the highest energy burdens and have
22 suffered the most from historical environmental injustices,
23 economic disparities, and the current climate crisis.

24 The Equitable Building Decarbonization Direct
25 Install Program is designed intentionally to address these

1 challenges by providing building decarbonization upgrades
2 to low-income households in under resourced communities.
3 Next slide, please.

4 The state has allocated \$922 million to the
5 Equitable Building Decarbonization Program over the next
6 five years. Funding sources are the General Fund and the
7 State Greenhouse Gas Reduction Fund. The total budget will
8 be divided into several program components. The bulk of
9 the funds, about \$690 million, will support the Statewide
10 Direct Install Program, which is the focus of the
11 guidelines I'm presenting today.

12 Other components, which will be rolled out in the
13 future, include the Tribal Direct Install Program, a
14 Statewide Incentive Program, and funds to support existing
15 state programs. In addition, 10 percent of total funds
16 will be used for program administration. Next slide,
17 please.

18 As I mentioned, the focus of the proposed
19 guidelines is the Statewide Direct Install Program. Direct
20 Install refers to a type of program that provides and
21 installs energy efficient electric appliances, energy
22 efficiency measures, and related upgrades directly to
23 consumers at minimal or no cost. The Statewide Direct
24 Install Program will serve low-income households located in
25 under resourced communities.

1 Low-income households are defined as households
2 earning up to 80 percent of the area median income.
3 Participating households may be single-family homes,
4 multifamily buildings, or manufactured or mobile homes.
5 They may be owner-occupied or rented, and the program will
6 include renter protections. Under resourced communities
7 include Disadvantaged Communities as defined by
8 CalEnviroScreen 4.0, and low-income census tracts.

9 Overall, 59 percent of Californians live in under
10 resourced communities. Though the funding for this program
11 is significant, it's far from enough to serve every under
12 resourced community in the state. Therefore, the initial
13 phase of the program will serve what we're calling initial
14 community focus areas. Next slide, please.

15 Initial Community Focus Areas will be identified
16 based on several criteria, including:

17 The presence of local organizations with which
18 the program administrator can partner for effective
19 outreach and engagement in the community. Communities in
20 which households are most likely to experience utility bill
21 savings as a result of decarbonization. Communities
22 particularly vulnerable to extreme heat, high fire risk,
23 other climate risks, and high levels of ambient air
24 pollution. Communities underserved by existing
25 decarbonization and weatherization programs. And

1 communities with high energy burdens.

2 In addition, within initial community focus areas
3 the program will use data, including interval meter data,
4 to target households that are the best candidates for
5 decarbonization. In particular households most likely to
6 experience savings on their energy bills as a result of
7 decarbonization upgrades. Next slide, please.

8 Participating households will receive
9 decarbonization upgrades at no cost to the building owner
10 or occupant. Measures that are eligible to be funded
11 through the program are listed on this slide. They include
12 heat pumps, other efficient electric appliances,
13 weatherization upgrades, electrical wiring and panel
14 upgrades, and remediation and safety improvements.

15 Not every household that participates in the
16 program will receive every measure on this list. Some
17 measures will be more appropriate for certain homes than
18 others, based on climate zone, building type, and other
19 factors.

20 At a minimum, each household served will receive
21 a heat pump for space heating and cooling, or a heat pump
22 water heater, or both. In addition, at the conclusion of
23 the retrofit, at least two of the following four end uses
24 in the home must be electric. Those are space heating,
25 water heating, cooking, and clothes drying.

1 Beyond that, program administrators will develop
2 a set of packages of eligible measures to be applied to
3 participating buildings with input from building owners and
4 occupants. Next slide.

5 The program will be administered by three
6 Regional Administrators, serving Northern, Central and
7 Southern California as shown on this map. The
8 administrators will be selected through a competitive
9 solicitation, which will be released soon, following the
10 adoption of the guidelines.

11 Each administrator will be required to partner
12 with multiple community-based organizations for culturally
13 appropriate outreach and engagement with participating
14 households and communities. Next slide.

15 Stakeholder engagement in the development of the
16 Equitable Building Decarbonization Program started in
17 December of last year, when we released a Request for
18 Information and Commissioner McAllister hosted a Lead
19 Commissioner Workshop to solicit input on the overall
20 scoping of the program.

21 The input we received at that workshop, and in
22 comments to the docket, informed the development of draft
23 guidelines for the Direct Install Program, which were
24 released in May of this year. In May and June we held
25 regional public workshops to solicit input on the draft

1 guidelines.

2 Hybrid workshops were held in Fresno, Indio, Los
3 Angeles, San Francisco, and Santa Rosa. These workshops
4 featured a discussion with local stakeholders including
5 community-based organizations, utilities and local
6 efficiency programs to solicit place-based feedback and
7 learn from local challenges and issues. We also held
8 several online-only workshops and tribal listening
9 sessions.

10 In an effort to expand participation and
11 engagement, the guidelines were translated into Spanish,
12 and interpretation services were provided in-person and
13 online. Next slide, please.

14 Overall, we received 75 comments to the docket,
15 as well as many dozens of verbal comments at workshops and
16 listening sessions. This slide highlights just a few of
17 the themes reflected in the comments we received. As well
18 as associated changes that were made from the draft
19 guidelines to the proposed final guidelines.

20 First, we received comments related to the scope
21 of the home upgrades that will be conducted through the
22 program. We know that many homes in under resourced
23 communities have extensive remediation needs, and that the
24 program needs to strike the right balance between meeting
25 the remediation needs of each participating household,

1 while also benefiting as many households and as many
2 families as possible in a meaningful way.

3 Some commenters suggested that we increase the
4 limits on the amount of remediation work that the program
5 can fund in participating homes. Based on this input and
6 additional staff analysis, we did increase the cost cap for
7 remediation and electrical work in the proposed guidelines
8 versus the draft guidelines.

9 In addition, the cost caps are designed as
10 “average” caps. Meaning that they don’t limit the amount
11 that can be spent on remediation in any particular home,
12 but rather are an average across all homes served by the
13 program. That will allow the program to serve some homes
14 with higher remediation needs, and average that out with
15 other homes whose needs are lower.

16 As shown in the table, we also made changes from
17 the draft to the proposed final guidelines on a number of
18 other topics including tenant protections, workforce
19 standards, the role of community-based organizations in
20 program implementation, household income eligibility, the
21 criteria for identifying initial community focus areas, and
22 the list of eligible measures, among others. Next slide,
23 please.

24 I’d also like to describe some revisions that
25 were recently made to the Workforce Standards and

1 Requirements section of the proposed guidelines. These
2 revisions appear in a new version of the proposed
3 guidelines that was posted to the docket yesterday. The
4 revisions can be seen in strikeout/underline format on
5 pages 28 and 29 of the guidelines.

6 The overall purpose of the revisions is to
7 strengthen the program's workforce requirements in order to
8 ensure high-quality installations and support the creation
9 of local, high-quality jobs in the communities served.

10 To summarize the changes, in the Contractor
11 Preference section the revisions expand on the list of
12 contractor preference criteria. Added criteria include
13 participation in a state-approved apprenticeship program,
14 and being party to a multi-craft community workforce and
15 training agreement covering work on the project. The
16 revisions also specify that administrators shall provide a
17 preference for contractors that meet at least three of
18 criteria on the preference list.

19 Second, in the Training and Experience
20 Requirements section, the revisions specify that at least
21 one-third of workers on a project must meet minimum
22 specified training or experience requirements. They also
23 specify that electrical panel upgrades must be installed by
24 state-certified electricians.

25 And finally, with regard to bundling, the

1 revisions strengthen the language to require rather than
2 encourage administrators to bundle projects for economies
3 of scale, and to encourage contractor participation. Next
4 slide, please.

5 With that, I'd like to recommend that the
6 Commission approve the Resolution to adopt the Equitable
7 Building Decarbonization Direct Install Program Guidelines.
8 And approve staff's determination that this action is
9 exempt from CEQA. Next slide, please.

10 As I mentioned, many CEC staff contributed to the
11 development of these guidelines. I'd particularly like to
12 thank all the people listed here for their contributions to
13 this effort. That concludes my presentation and I'd be
14 happy to address any questions.

15 CHAIR HOCHSCHILD: Thank you so much, Diana.
16 That was terrific.

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

18 MS. BADIE: Hello, again. This is Mona Badie,
19 the Public Advisor of the California Energy Commission.
20 And the Commission now welcomes public comment on Item 7.
21 We'll first take public comment from folks in the in-person
22 location in the room, and then we'll move on to Zoom. So
23 we've asked folks to use our QR code to sign up to make a
24 public comment. But also, if there's other folks that
25 haven't signed up we can do a show of hands and I will make

1 sure that you are heard. So now moving to the QR code, the
2 in-room queue. One moment.

3 All right, so first we have David Calabrese with
4 D-A-I-K-I-N. And David, if you can approach the podium.
5 And we're asking for comments to be limited to two minutes
6 or less. Please do spell your name for the record and
7 announce any affiliation before you begin your comment.

8 MR. CALABRESE: Good morning. I'm Dave
9 Calabrese, a Senior Vice President for Government Affairs
10 with Daikin. It's C-A-L-A-B-R-E-S-E. Okay, thank you.

11 So Daikin is the world's largest HVAC company and
12 the number one manufacturer of heat pumps. We are fully
13 committed to doing our share to ensure the accelerated
14 decarbonization of buildings in California and across the
15 US.

16 The coming years will be critical to the
17 exponential and necessary ramp up of heat pumps. As to
18 consumer incentives, it's essential that we incentivize the
19 right type of heat pumps. Specifically, we believe that
20 heat pumps that utilize variable speed technology, also
21 known as inverter, are necessary to achieve the state's
22 ambitious goals. Variable speed heat pumps deliver great
23 overall efficiency and comfort in both heating and cooling
24 seasons, helping to lower energy bills for consumers.

25 Additionally, the ability of variable speed heat

1 pumps to modulate output by varying compressor speed can
2 help support grid stability and peak load management
3 through DR technologies, while providing superior comfort.

4 Another key feature of this technology is the
5 reduction in materials. Variable speed heat pumps use less
6 material for heat exchange, which means that the units have
7 smaller and more flexible footprints and brings benefits to
8 low-income consumers and reduced impact on the production
9 and transport of these products.

10 Unfortunately, the US lags most of the world in
11 this technology. It's essential that California also focus
12 on the deployment of variable speed technology. There is a
13 critical barrier however in achieving this transformation.
14 Policies or incentives like those in the guidelines, that
15 are designed to require variable speed heat pumps to meet
16 energy efficiency, or EER thresholds, will result in the
17 exclusion of affordable variable speed technology products
18 from the program.

19 Put simply EER is a metric that may be applicable
20 to fixed speed systems but does not account for the ability
21 of variable speed compressors to modulate, and does not
22 represent the peak power demand of these products as
23 applied in the field.

24 In closing we fully support CEC's heat pump
25 goals, but we urge you to carefully consider the way that

1 these incentives are designed for variable speed systems.
2 If designed without consideration for the benefits of these
3 systems we could compromise the market transformation that
4 we need to achieve our shared goals. Thank you very much.

5 MS. BADIE: Thank you. Next, we have Katie
6 Valenzuela, Central Valley Air Quality Coalition. If you
7 can approach the podium, Katie. Please spell your name for
8 the record, announce any other affiliation. And we are
9 asking for comments to be two minutes or less.

10 MS. VALENZUELA: Thank you, Katie Valenzuela, K-
11 A-T-I-E V-A-L-E-N-Z-U-E-L-A. I'm a Senior Policy Advocate
12 with the Central Valley Air Quality Coalition. And we are
13 members of the BEEP Coalition -- Building, Energy, Equity
14 and Power.

15 So we're here today, and we've circulated a
16 letter that we also sent to you on email. I'm really proud
17 of the broad coalition that signed on to support what are
18 the asks of frontline CBOs that are working right in the
19 transition right now in our communities.

20 And I really want to thank Commissioner
21 McAllister and all of your staff for all of the meetings
22 we've had with them. We helped organize the regional
23 workshops, we attended those workshops. We've been deeply
24 engaged and really want to appreciate all the changes that
25 have already been made in response to our comments in these

1 guidelines. So this letter really just outlines those
2 remaining changes that we feel are critical, both for
3 equity in the program, but also obviously, for the overall
4 success since we're very interested in seeing this program
5 continue to get more funding and move into the future.

6 So to highlight two of the high-level changes
7 that we're asking for, one regarding the remediation and
8 electrical upgrades cap. So the best data we have is from
9 the San Joaquin Valley pilot, which has happened obviously
10 pre-COVID, pre-inflation, in a very different market than
11 the Bay in LA. And those necessary improvements for
12 remediation and electrical upgrades cost over \$7,000 on
13 average. And that was obviously on top of other programs.
14 And so we are asking for this cap to be increased and also
15 to increase a little further for mobile homes.

16 I want to appreciate that staff recognizes mobile
17 phones cost more, but this is we think really instructive.
18 And we want to make sure that the workers are able to do
19 all of the high-quality work. So that residents aren't
20 then stuck with additional costs or needed improvements
21 down the line, or disqualified because they live in housing
22 that is subpar. Because obviously those are our target
23 populations.

24 Secondly, we definitely want to uplift the tenant
25 protections. And really again want to thank CEC staff.

1 This isn't normally what you do. And so the fact that
2 there is such a robust section in there is really exciting.
3 We do though want to uplift Sage's comments which we attach
4 to our letter about enforcement. Protections don't mean
5 anything if we can't enforce them and if residents don't
6 know what that looks like. So there are some further
7 changes that Sage had recommended that we do want to lift
8 up. The intersection between the housing crisis and the
9 energy burden crisis could not be more clear. And so we
10 just want to make sure that this program doesn't
11 inadvertently contribute to displacement or loss of housing
12 to people who are already vulnerable.

13 There's much more in there and many folks online
14 and in person today to make further comments. But I just
15 again want to thank you all for the work you've done on
16 this. We stand ready to continue to partner both in the
17 Legislature, and in implementation, and just want to thank
18 you again for all the changes that have already been made.
19 Thank you.

20 COMMISSIONER GALLARDO: This is Commissioner
21 Gallardo. Katie, you said you had three items you wanted
22 to add.

23 MS. VALENZUELA: I had two.

24 COMMISSIONER GALLARDO: Just two (indiscernible)
25 -- a third, if there was one.

1 (Overlapping Colloquy.)

2 COMMISSIONER GALLARDO: Thank you,
3 (indiscernible) third if there was one.

4 MS. VALENZUELA: Oh no, thank you. And there are
5 more in the letter, but those were the two high-level ones.

6 COMMISSIONER GALLARDO: Appreciate it.

7 MS. VALENZUELA: Thank you, Commissioner.

8 MS. BADIE: Thank you.

9 Next, we have Olivia Seidman from the Leadership
10 Council for Justice and Accountability. Olivia, if you can
11 approach the podium. Please spell your name for the
12 record, announce any other affiliations that you'd like to
13 share. And we're asking for comments to be two minutes or
14 less.

15 MS. SEIDEMAN: Yes. Thank you. My name is
16 Olivia Seidman, O-L-I-V-I-A S-E-I-D-E-M-A-N. And I'm with
17 Leadership Council for Justice and Accountability, which is
18 also a part of the Building Energy and Equity -- Building
19 Energy Equity and Power Coalition. So thank you.

20 So first I do want to express our gratitude for
21 CEC staff and Commissioners' willingness to work with
22 community groups and respond to feedback, especially by
23 including holistic home upgrades as eligible expenses.

24 We are also glad to see recognition in the
25 guidelines of the new unique challenges posed by

1 decarbonizing mobile homes through the set aside from
2 mobile homes, which should be a floor and not a ceiling.
3 And the higher cost cap for remediation for mobile homes.
4 However, based on the data from the SGB pilots, the average
5 cost cap should be higher. At least one \$10,000 for all
6 households and even higher for mobile homes.

7 Additionally, it is critical that income
8 eligibility be determined using statewide median household
9 income rather than area median income or AMI. Using AMI
10 will exclude disadvantaged and severely disadvantaged
11 households in low-income counties at the community level.
12 For example it would exclude Allensworth and Tulare County,
13 which under current definition using statewide median, MHI,
14 is actually a severely disadvantaged community. But if you
15 use AMI, because Tulare County is a low-income county it's
16 not even considered a disadvantaged community. Another
17 example is Indio in Riverside County.

18 Additionally, we have concerns about the criteria
19 used in the analytic tool to target communities. By
20 prioritizing areas that have higher avoided GHG emissions
21 and have more eligible households close together, the tool
22 could easily exclude rural areas that are in dire need of
23 investments. We strongly urge that those criteria are not
24 used, or other safeguards are in place to ensure that rural
25 communities are not excluded or otherwise de-prioritized.

1 Additionally, we are concerned that the directive
2 to avoid panel upgrades could inadvertently exclude
3 households that need upgrades or otherwise lead to lower
4 quality upgrades. We recommend removing that language from
5 the guidelines.

6 Finally, we urge stronger tenant protections and
7 enforcement mechanisms to ensure that participants are not
8 displaced as a result of upgrades to their units. And
9 echoing what Katie said around the Sage analysis that's
10 very crucial.

11 And the rest of our points are in the in the
12 letter that was circulated. Thank you.

13 MS. BADIE: Thank you.

14 Next, we have Andrew Dawson from the California
15 Housing Partnership. Andrew, if you could approach the
16 podium, please spell your name for the record, and announce
17 any other affiliations if you want to share. We're asking
18 for comments to be two minutes or less. Thank you.

19 MR. DAWSON: Hi, I'm Andrew Dawson, A-N-D-R-E-W
20 D-A-W-S-O-N, with the California Housing Partnership. The
21 California Housing Partnership is kind of this interesting
22 organization in that we're a state-created entity, but
23 we're a private nonprofit. Our mission is to increase the
24 supply of affordable and sustainable homes for low-income
25 renters in California.

1 In general, we are pretty happy with the
2 guidelines that have been proposed. We want to thank a lot
3 of the staff that met with us, including Diana, Deana,
4 Hallie, and much of others who met with us when they're
5 able to, to discuss the guidelines. And we could tell from
6 our Coalition's letter which had, I think up to around 20
7 organizations sign on to it, have been really considered
8 and really looked into as guiding tools for the guidelines.

9 That being said, there are parts to this proposed
10 guideline that we find can be improved upon. Like people
11 have said already, tenant protections is a big thing. But
12 we look forward to working with the Energy Commission on
13 hammering that out and making that way better in the
14 future. As well as ensuring low-income renters in
15 California aren't left out of the clean energy transition.
16 Thank you.

17 MS. BADIE: Thank you.

18 Next in the room, we have Christine Selig.
19 Christine, if you could approach the podium, please spell
20 your name for the record announce any affiliation you'd
21 like to share. And we're asking for comments to be two
22 minutes or less.

23 MS. SELIG: Hi, my name is Christine Selig, C-H-
24 R-I-S-T-I-N-E S-E-L-I-G. And I'm with PODER in San
25 Francisco. And we're also part of Building Energy, Equity

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1 and Power. PODER is an environmental economic justice
2 organization.

3 I also wanted to thank you for your engagement
4 process. And also thank the CEC for the Building
5 Electrification Summit. And just congratulate you on the
6 success. It was great. I hope you do it every year.

7 I want to speak specifically to our work of
8 building retrofits and electrification in San Francisco.
9 We've started to do implementation projects, to sort of
10 test out policy and build the model, which we hope to
11 replicate all over the city. And specifically we're
12 working with AEA do the engineering and also the Department
13 of the Environment.

14 And for our first couple of projects that we're
15 looking at, which are building retrofits for multi-unit
16 buildings, affordable. They're either deed restricted, or
17 they're what people call naturally occurring affordable
18 housing units.

19 And what we're looking at are per cost units
20 between about \$29,000 and \$79,750, so which is quite -- it
21 just looks like it's going to be a fairly expensive. I
22 mean we already know this, but now that we're actually
23 starting to get the data back of how much it's actually
24 going to cost us per unit this does include appliance
25 replacement. What it doesn't include, but it's also part

1 of the work we're doing is pest and rodent control,
2 asbestos and lead abatement, and also mold remediation, and
3 indoor air quality improvements. So those would be an
4 additional cost to those numbers.

5 And we're happy to share the data as we do this
6 project so you kind of -- so that we can get more and more
7 accurate. I know that people often think of an equity
8 approach to building retrofit as like a nice add-on. We
9 think it's actually like an effective approach to ending
10 the climate crisis. So thank you.

11 MS. BADIE: Thank you.

12 Before we transition to Zoom, I just want to make
13 sure I didn't miss anyone in the room that would like to
14 make a comment.

15 All right, I'm going to transition to the Zoom
16 attendees. If you are joining us by Zoom online or on the
17 phone, and you'd like to make a comment, we're asking you
18 to use the raise hand feature. If you're online you'll see
19 an open palm at the bottom of your screen next to the raise
20 hand queue. And then if you are on the phone, you'll press
21 *9 to raise your hand.

22 All right, Grace Hut, I'm going to open your
23 line. Please spell your name for the record, announce any
24 affiliation. And we're asking for comments to be two
25 minutes or less. I'm going to open your line now.

1 MS. HUT: Hi, thank you so much. My name is
2 Grace Hut, G-R-A-C-E H-U-T. And I am speaking on behalf of
3 Strategic Actions for a Just Economy. We would like to
4 extend our gratitude for the thoughtful consideration of
5 tenant protections within the proposed Equitable Building
6 Decarbonization Program Guidelines. We really appreciate
7 the Commission's dedication to addressing the critical
8 issue of decarbonization, while ensuring that tenants are
9 safeguarded during this transition. And while we
10 acknowledge the inclusion of tenant protection provisions
11 in the program guidelines, we still think there are some
12 gaps that will leave tenants vulnerable to displacement
13 that I would like to highlight today.

14 First, it is crucial to provide clear information
15 on how these protections will be enforced, which there is
16 currently no language on the guidelines. And without
17 enforcement protections are essentially meaningless. So we
18 recommend providing tenants with avenues for reporting
19 contract violations and also having robust enforcement
20 mechanisms and penalties.

21 Secondly, we believe that property owners should
22 be limited from arbitrarily evicting tenants if they are
23 receiving a public subsidy to make value added upgrades to
24 their properties. So for a period of time after program
25 participation, we would like to see that property owners

1 are prohibited from evicting tenants for any reason.

2 We have provided an attached appendix to the
3 letter that was circulated by the Building Energy Equity
4 and Power Coalition that outlines more specifically how we
5 want to see these tenant protections modified. And we urge
6 you to consider and incorporate these changes. Thank you
7 so much.

8 MS. BADIE: Thank you.

9 Next, we have Marjaneh Moini. I'm going to open
10 your line. If you can please spell your name for the
11 record, announce any affiliation. We're asking for
12 comments to be two minutes or less.

13 DR. MOINI: Hi, thank you. My name is M-A-R-J-A-
14 N-E-H, last name M-O-I-N-I. I'm with Physicians for Social
15 Responsibility Los Angeles. They're part of BEEP
16 Coalition. On behalf of health professionals organizing
17 with Physicians for Social Responsibility in Los Angeles
18 and San Francisco Bay, I thank the CEC for including tenant
19 protections. And prioritizing indoor public health in its
20 Equitable Building Decarbonization Program.

21 The CEC must maximize public health benefits in
22 all of its programs. However, I would like to raise the
23 lessons learned from our local environmental justice
24 partners that the average cost cap for home remediation is
25 still low. I want to amplify our partners concerns to

1 raise the average cost cap for home remediation to at least
2 \$10,000. And also provide enforcement of tenant
3 protection. Thank you for your consideration.

4 MS. BADIE: Thank you.

5 Next, we have Beckie Menten. Beckie, I'm going
6 to open your line. Please spell your name for the record,
7 announce any affiliation you'd like to share. And we're
8 asking for comments to be two minutes or less.

9 MS. MENTEN: Good morning. My name is Beckie
10 Menton, that's B-E-C-K-I-E M-E-N-T-E-N. And I'm calling
11 with the Building Decarbonization Coalition.

12 I want to say good morning and thank you first to
13 the Chair, Commissioners, and the CEC staff for the work on
14 this program to date. The Building Decarbonization
15 Coalition appreciates the program's focus on low-income
16 homes, particularly -- excuse me for that -- particularly
17 the awareness of public health impacts associated with
18 indoor air quality, and the requirements for CBO
19 engagement. We believe this will help facilitate an
20 equitable transition and support programs access.

21 We also appreciate all the extensive work of the
22 Energy Commission as reflected in updated program
23 guidelines to respond to stakeholder feedback. Although we
24 recognize the challenge, we also recommend that the CEC
25 consider increasing the amount spent on transitioning

1 mobile homes. These units are affordable to low-income
2 families but require intentional upgrades to improve public
3 health outcomes for communities severely burdened by the
4 climate crisis.

5 Furthermore, we encourage the CEC to monitor
6 potential impacts of this program on tenants to continue to
7 seek opportunities for program improvement. We believe
8 that the program implementation stage will be crucial and
9 require active participation from community advocates and
10 voices. Particularly as this program will potentially
11 inform CEC implementation of the Inflation Reduction Act.
12 Thank you again for all of your work on this to date.

13 MS. BADIE: Thank you.

14 Next, we have Andrew Graf. Andrew, I'm going to
15 open your line. Please spell your name for the record,
16 announce any affiliation. We're asking for comments to be
17 two minutes or less.

18 MR. GRAF: Good morning, Chair and Commissioners.
19 My name is Andrew Graf. That's A-N-D-R-E-W G-R-A-F.

20 CHAIR HOCHSCHILD: I'm sorry to interject. I
21 need to leave for the airport, so I have to bow out. And
22 Vice Chair, if you could just chair the meeting from here.
23 I'm sorry to interrupt. Thanks.

24 VICE CHAIR GUNDA: Thank you, Chair.

25 Go ahead.

1 MR. GRAF: Not a problem. Thank you, Chair.

2 Again, my name is Andrew Graf. I'm speaking
3 today on behalf of the Joint Committee on Energy and
4 Environmental Policy, Western States Council of Sheetmetal
5 Workers, the California State Pipe Trades Council, and the
6 International Brotherhood of Electrical Workers, National
7 Electrical Contractors Association, Labor Management
8 Cooperation Committee.

9 We'd like to express our support for the Direct
10 Install Program Guidelines as revised on October 17th. I'd
11 like to begin by thanking Commissioner McAllister and
12 Commission staff for their meaningful engagement with
13 stakeholders to develop the most effective program
14 possible. We are pleased to see that the revisions to the
15 program guidelines include enforceable workforce standards.

16 We support the modifications to the contractor
17 preference criteria, which will ensure prioritization of
18 high road contractors. We support the mandate that program
19 administrators establish minimum training and experience
20 requirements for the onsite construction workforce.
21 Including the requirement that all-electrical panel
22 upgrades be installed by state certified electricians,
23 which will ensure that the workers are qualified and energy
24 savings are not lost or forgotten due to poor quality
25 workmanship.

1 And finally, we support the requirement to bundle
2 projects into single contracts, which will increase economy
3 of scales and facilitate the participation of high road
4 contractors. These workforce standards will promote work
5 quality, generate greater energy efficiency savings,
6 improve customer satisfaction and participation, improve
7 safety, and improve compliance with codes and standards.

8 And we respectfully request that the Commission
9 adopt the proposed guidelines as revised. Thank you for
10 your time.

11 MS. BADIE: Thank you.

12 Next, we have Fatima Abdul-Khabir. I'm going to
13 open your line. If you can please spell your name for the
14 record, announce any affiliation. We're asking for
15 comments to be two minutes or less. Fatima, if you could
16 please unmute on your end and you may begin. Fatima, I'm
17 seeing that your line is open, but we're not hearing any
18 audio on your end. I'm going to go to the next commenter,
19 if you want to see if you can adjust your audio.

20 Next, we have Zach Lou. Zach, I'm going to open
21 your line. If you could please spell your name for the
22 record, announce any affiliation. We're asking for
23 comments to be two minutes or less.

24 MR. LOU: Thank you. Good morning, Commissioners
25 and staff. My name is Zach Lou. So first name Z-A-C-H,

85

1 last name L-O-U, and I'm the Director of the California
2 Green New Deal Coalition.

3 First, I just want to echo the thanks and
4 gratitude to the CEC staff and Commissioners for the
5 improvements that were made from the initial draft
6 guidelines. And all the work that went into that,
7 including proactive efforts to listen to advocates and
8 other stakeholders, including meeting with us and many of
9 our partners throughout the process.

10 In particular, were encouraged to see the
11 improvements made to specifically focus on low-income
12 households in the program, and some of the even more recent
13 details on workforce standards. We also want to uplift the
14 stronger language added to the program's tenant
15 protections, which as others have noted is something we've
16 heard from CEC staff is more new and less familiar to the
17 agency as they've been developing this program. So very
18 much appreciate the detail and improvements made there.

19 At the same time, we still think that there's
20 room for improvement there as others have also uplifted
21 with the BEEP Coalition and Sage submitting comments that
22 detail specific changes that can be made to further improve
23 the section and ensure greater safeguards for tenants.
24 Specifically, I really think it's important to provide
25 clear information on how these protections will be

1 enforced, which there currently is no language on. So
2 we're recommending that we provide tenants with avenues for
3 reporting contract violations, and having robust
4 enforcement mechanisms and penalties.

5 I also just want to recognize and appreciate that
6 the cost caps are averages and also that the average cost
7 caps were increased from the draft guidelines.

8 And similar to how others have stated, we also
9 kind of understand this is something that program
10 administrators can learn more about implementation is
11 underway. But would encourage the Commission to consider
12 further raising the average cost cap if the current limits
13 end up disincentivizing investments in homes and
14 communities that can most benefit from the program.

15 Thank you for your time. And we look forward to
16 further collaboration with you as the program rolls out.

17 MS. BADIE: Thank you.

18 Next, we'll go to Jessica Guadalupe Tovar.
19 Jessica, I'm going to open your line. Please spell your
20 name for the record, announce any affiliation. We're
21 asking for comments to be two minutes or less.

22 MS. TOVAR: Hi, this is Jessica Tovar with the
23 local Clean Energy Alliance and Building Energy Equity And
24 Power. I just want to uplift also, we've mentioned that
25 the pilots in the San Joaquin Valley needing about \$22,000.

1 It was also estimated by East Bay Community Energy that
2 homes for a full retrofit will need upwards of about
3 \$37,000. So just to hit home that \$6 and \$7,000 is not
4 going to do enough to fully retrofit homes. Especially in
5 environmental justice communities that have been heavily
6 disinvested over time and need a lot more upgrades in order
7 to maintain and power all-electric appliances. So I just
8 wanted to uplift that.

9 I also wanted to reiterate that it's important
10 that we have enforceable tenant protections, because in
11 order for our communities to reap the benefit of Clean
12 Indoor Air, we need to be able to stay in our homes once
13 those retrofits have been done.

14 I also want to uplift that, replacing appliances
15 and electrifying homes is one thing, but if we still have
16 dirty sources of energy outside in our communities that it
17 really negates the whole purpose when we know that outdoor
18 air actually enters our home and settles in the home. So
19 just to uplift that it is in your purview to also regulate
20 and make sure that our outdoor air sources come from clean
21 energy sources as opposed to the dirty ones.

22 Last but not least, you know, I want to emphasize
23 that it's very important that agencies talk to each other,
24 and that we stack the benefits and the resources and the
25 monies that will go into these retrofits. So that they're

1 not piecemealed, and done actually holistically, so that we
2 can reap the benefit of having a well done retrofit to our
3 home. Clean power to the people. Thank you.

4 MS. BADIE: Thank you.

5 Fatima, I'm going to come back to you again to
6 see if we can get your audio feed in.

7 MS. KHABIR: Hi, are you able to hear me?

8 MS. BADIE: Yes, thank you.

9 MS. KHABIR: Okay, awesome. Thank you so much.
10 I was giving my whole comment to myself. Fatima Abdul-
11 Khabir, F-A-T-I-M-A A-B-D-U-L hyphen K-H-A-B-I-R. I'm
12 representing the Greenlining Institute today.

13 So first I just wanted to thank the CEC staff and
14 Commissioner McAllister for the time that they dedicated to
15 reading and incorporating the feedback they received from
16 the guidelines, definitely appreciate that. We appreciate
17 the guideline's new focus on low-income households, the
18 details added to the tenant protections and workforce
19 sections, and the requirement to partner with multiple CEOs
20 and program administration.

21 Today, I'm just going to uplift two items for the
22 CEC to track and consider revising to ensure equitable
23 implementation of this program, along with some of the
24 other concerns that the Coalition had raised.

25 The first item is on the required measure that

1 only at least two out of four end uses in the building must
2 be electrified. We're concerned that this may
3 disincentivize the holistic home approach to conduct deep
4 retrofits for low-income households in coordination with
5 gas decommissioning efforts.

6 We do honor that households may have their own
7 preferences on electrification and recognize that
8 implementers have a variety of valid reasons to undergo
9 electrification of just two end uses. However, we do ask
10 that clarifying language be added to the required measures,
11 specifically Section B on page 13, requiring that program
12 administrators or contractors share the full reason why
13 full electrification was not pursued, along with a list of
14 valid reasons.

15 The second item I'm going to cover is under the
16 Workforce Requirements section. We do appreciate the
17 inclusion of the apprenticeship requirement and multi-craft
18 community workforce and training agreements.

19 We would like to see continued coordination with
20 labor standards development from the California Workforce
21 Development Board, as well as from affected contractors to
22 continue to define what a high quality job looks like, as
23 the building decarbonization field develops.

24 We'd also like to see this program prioritize
25 contractors who have the ability to communicate with

1 customers in languages other than English.

2 And lastly, we would like to see more guidance
3 and specific requirements for contracting with diverse
4 businesses. Specifically, we're concerned that since only
5 three out of six contractor preferences must be met in the
6 guidelines, the MWDBE requirements might be insufficient.
7 We recommend that the CEC train their program
8 administrators and contractors to track the guideline's
9 proposed metric related to number of contracts and dollar
10 values awarded for small MWDBE and LGBT businesses to
11 assess whether future iterations of the program should
12 include a set aside for MWDBE businesses to increase access
13 and diversity. Thank you so much.

14 MS. BADIE: Thank you.

15 Next, we have a Zoom account by the name of PODER
16 SF. I will open your line. If you can announce your name
17 and spell your name for the record, and announce any
18 affiliations you want to share. We're asking for comments
19 to be two minutes or less.

20 MR. DIAZ: Good morning, my name is Antonio Diaz,
21 A-N-T-O-N-I-O, last name D-I-A-Z, and I'm with PODER here
22 in San Francisco, and am also part of the Building Energy
23 Equity and Power Coalition. I just want to reiterate our
24 appreciation for staff, Commissioner McAllister, for
25 engaging with community organizations, and various

1 environmental justice stakeholders about feedback to the to
2 the guidelines. And appreciated the incorporation of
3 issues that that we raised in our conversations.

4 I do want to underline the importance of a couple
5 of items that my colleagues have raised in the room and
6 through Zoom and phone, around the importance of including
7 the renter protections, was appreciative that they're
8 there. But the critical importance of having enforcement
9 mechanisms in a city like San Francisco, which has seen
10 hyper-gentrification. We know that the rules on the book
11 are not enough. We need ways to have them enforced.

12 We don't have a housing crisis. We have a
13 displacement crisis. And so I think that we don't want
14 that as we advance climate equity and building
15 decarbonization that were worsening the impacts on low-
16 income renters throughout the State of California.

17 Finally, just my second point. My colleague in
18 the room, Chris Selig, mentioned about the demonstration
19 project that we're doing in San Francisco. In which the
20 initial assessment is on the low end, 29,000 per unit, up
21 to 79,000 per unit, in doing the retrofits. Obviously, the
22 issue of the cost caps need to be addressed. And look
23 forward to further conversations and collaborations to make
24 sure that as this program is implemented, that we're all
25 working to advance climate equity and climate justice.

1 Thank you.

2 MS. BADIE: Thank you for your comment.

3 And that concludes public comment from this item.

4 Back to you, Vice Chair.

5 VICE CHAIR GUNDA: Thank you, Mona. Moving to
6 Commissioner discussion. Commissioner McAllister, would
7 you like to start?

8 COMMISSIONER MCALLISTER: Absolutely. Let's see.
9 First of all, I just want to say thanks to Diana for the
10 presentation. You've just been stellar throughout this
11 whole development. And I really appreciate your and the
12 whole staff's due diligence and patience and just
13 disposition to really listen to stakeholders. I think
14 that's our that's our best approach is to listen and really
15 work through these issues that you've all heard are tough
16 issues. Some of these issues are very, very tough. And
17 it's sort of the broader context in which this program is
18 venturing, is complicated and just has lots of lots of
19 constraints and tradeoffs and lots of challenges that we're
20 going to face. Having said that, I'm super optimistic
21 about these guidelines and the programs that they will
22 deliver over time.

23 I did want to just see if Diana, or other staff,
24 before I kind of -- I have some fairly extensive comments
25 just because I think this is a big deal. And I want to

1 give it its due. But I wanted to see if any of the
2 particular issues that some of the stakeholders brought up,
3 staff might want to respond to such as AMI, the income
4 thresholds, and some of the tenant protection issues, and
5 any other issues we wanted to clarify.

6 MS. MANETA: Sure. Thank you, Commissioners.
7 Thank you, Vice Chair. Thank you, Commissioner. This is
8 Diana Maneta again. And I really appreciate the public
9 comment. I think commenters raised a lot of really, really
10 critical issues. And I can make a few comments just with
11 regard to our approach in the proposed guidelines on some
12 of those topics.

13 With regard to the cost caps for remediation and
14 wiring, I wanted to first of all just clarify what our
15 approach is. Again, we got I think, some really great
16 input on that. First, to clarify our approach in the
17 proposed guidelines. They include average cost caps as I
18 mentioned that are only for the remediation and electrical
19 work part of a project. So they don't include the cost of
20 heat pumps, heat pump, water heaters, other efficient
21 electric appliances, weatherization. All of that could be
22 above and beyond the average cost caps, so I want to
23 clarify that point first.

24 Those average cost caps in the proposed
25 guidelines are \$6,000 for single family homes, and for

1 units in multifamily buildings. And a little bit higher,
2 \$7,200 for manufactured and mobile homes, recognizing in
3 many cases a higher remediation need in those buildings.

4 I think commenters brought up some important data
5 from the San Joaquin Valley Pilot Program. And I wanted to
6 just mention also we did look at that data in developing
7 the guidelines, or at least it may be different, but
8 information from that program. And the information we saw
9 indicated that about three-quarters of homes in that
10 program had less than \$5,000 in remediation costs. Of
11 those three quarters, the average was around \$2,000. So
12 there is a small number of homes that are requiring really
13 substantial remediation, I think bringing those average
14 costs up.

15 And so while I really do think commenters are
16 making very important points about the need for sufficient
17 funding for remediation, our thought was that the average
18 cost caps included in the proposed guidelines would allow
19 the majority, the vast majority of homes, for their
20 remediation needs to be met. And again, just trying to
21 find the right balance between meeting the needs of each
22 home and then serving as many as many families as possible.

23 That's something we also mentioned in the
24 guidelines. We'll be collecting information on requiring
25 administrators to collect information on and can certainly

1 adjust as needed if we learn that we didn't hit the balance
2 right. So those are just a few comments on that really, I
3 think challenging and important topic.

4 In terms of tenant protections, really grateful
5 for the input we got from stakeholders in the past as well
6 as here today on that topic. As commenters noted we did
7 make a lot of changes related to tenant protections between
8 the draft guidelines and the proposed final guidelines.

9 Related to penalties and enforcement that's a
10 topic that we heard about from some commenters. I wanted
11 to mention that we, the CEC, is exploring including
12 language in contracts with program administrators that
13 would require the reimbursement of program funds by
14 property owners in the case that tenant protections are
15 violated. We think that would be a pretty effective
16 penalty enforcement mechanism that goes beyond what we've
17 seen in a lot of other programs that have tenant
18 protections. So hoping to be able to do that.

19 We also, as we mentioned in the guidelines, in
20 the program participation agreements that CEC will be
21 developing, those will -- may take the form of lease
22 addenda or deed recordings. And the intent is really to
23 ensure that they are legally enforceable agreements and not
24 some sort of standalone agreement that's hard to enforce
25 legally.

1 We also mentioned in the guidelines that
2 administer readers will be, and their CBO partners, will be
3 required to follow up with tenants after the program
4 related to their experiences as tenants, and whether the
5 tenant protections were effective. And also have a phone
6 number for that tenants can call to report any concerns or
7 violations.

8 So we're trying to get there, not sure that we
9 got as far as would be ideal on tenant protections. I
10 think this is a relatively new area for the Energy
11 Commission. And so trying to do the best we can. And
12 again to learn from the experience, we'll be collecting
13 that information and can certainly adjust as we go forward.

14 The other topic, let's see that Commissioner
15 McAllister mentioned was area median income, I think we
16 heard some comments about. So at this point the income
17 requirement for participation threshold - sorry,
18 participation in the program, the threshold is 80 percent,
19 up to 80 percent of the area median income. And that --
20 the AB 209, our authorizing statute specifically points us
21 to a definition of low- to moderate-income that's based on
22 area median income. So I believe there are really pros and
23 cons to using different definitions of low income. But in
24 this case we went with that definition based on the
25 language in the statute.

1 And I think I'll stop there for now. Thank you.

2 COMMISSIONER MCALLISTER: Great, thanks. Thank
3 you so much, Diana.

4 So let's see, I want to just make a few comments.
5 I want to start with thank yous fir for the commenters
6 today, and just throughout. The stakeholder engagement
7 here has just been amazing. I mean we learned so much. I
8 know our whole team is grateful. I certainly am. And just
9 that we want that to continue as we roll this program out,
10 and get the administrators on board, and put the program
11 out there in the world. We're going to learn a lot. I
12 think we all acknowledge that.

13 And I think there probably will turn out to be
14 not an equivalent program to this. So I think we're going
15 to dial it in as we go forward. And Diana's points about
16 the remediation cost caps and things. We will be open to
17 modifying those as things unroll, as well as the other sort
18 of learnings. We'll have to on tenant protections, will
19 maybe become partners that can help us do that. And help
20 us, help have more teeth over time for example.

21 I did -- so I wanted to just thank all of you. I
22 will get to the sort of substantive comments that I want to
23 make here in a minute. But Mr. Calabrese, Katie
24 Valenzuela, Ms. Seideman, Mr. Dawson, Ms. Selig over at
25 PODER, I Ms. Selig and Mr. Diaz, Ms. Hut, Dr. Moini, Ms.

1 Menten, Mr. Graf, Mr. Lou, and Ms. Abdul-Khabir, Ms. Tovar,
2 I just really appreciate. I think I got everybody. And I
3 really appreciate all of those comments. And clearly
4 you're invested in this program, and we want to really
5 partner going forward.

6 I wanted to thank staff next. This has been a
7 major team effort across two divisions. And this project
8 started in the Efficiency Division under the fantastic
9 leadership of Jennifer Nelson. And the guidelines process
10 has been led by Diana Maneta as we've all heard. Diana is
11 just an expert in this, and we're so happy to have her on
12 staff and leading this effort, and really led us to the
13 thoughtful landing when these comprehensive guidelines that
14 are that are in front of us today. So really is the best
15 of the CEC process I think.

16 And I think everyone can understand we're trying
17 to find a balance, taking care of public monies both state,
18 which is what we're talking about here, and in the not too
19 distant future, federal funds that will come and hopefully
20 be able to slot into these same program vessels.

21 The RREDI Division has taken these guidelines
22 over the finish line and under the leadership of Hally
23 Cahssai, and of course Deanna Carrillo, who leads the
24 Division. And Christine Collopy, our Deputy Director of
25 RREDI. And others on this team I'd like to highlight are

1 Christina Delogolo (phonetic) our Manufactured Housing
2 Lead; Tiffany Mateo and Larry Froess, our senior mechanical
3 engineers. Our incredible staff who did a lot of analysis
4 and stakeholder engagement: Mei Chang, Vivian Chi, Carla
5 Dillon, Pam Doemann, and Katie Webster. (phonetic) Also
6 our CCO, the Chief Counsel Office, Mike Murza and Christina
7 Evola.

8 And then finally, our Public Advisor, Mona Badie
9 has just been stellar throughout.

10 So that act of engagement is going to continue.
11 And we're looking forward to moving forward with the
12 program.

13 So we have listened quite a bit. And we listened
14 to all the comments and really considered them deeply. And
15 really this is a beginning. We will continue to listen,
16 and we'll learn a lot I think. The San Joaquin Valley
17 Pilots, many of our staff including myself have been down
18 there to visit. Another visit coming up. We're really
19 asking tough questions and unpacking and lifting the hood
20 on the San Joaquin Valley communities where those
21 installations took place.

22 I think one point I would make there is that that
23 is kind of a convenient sample. There are reasons why
24 those communities were sort of selected and the historical
25 kind of underpinnings. And so, I think we're part of this,

1 we want to sort of see how typical that really is. But are
2 certainly open to whatever the reality turns out to be, and
3 it'll be diverse across the state. So certainly paying
4 attention there.

5 And we have, this is a guidelines process, so we
6 can and will update the guidelines periodically. And so
7 what we try to do, just to describe that process, is to
8 gather up issues as they appear, the program moves forward.
9 And we get a big enough bucket of important issues that
10 really need changing, then we can adopt an updated version
11 of the guidelines. So we don't have to go through a whole
12 rulemaking process to do , so it's a much more facile
13 process. We're grateful for the Legislature for getting us
14 that exemption of APA for this program.

15 I also wanted to highlight the air quality
16 expertise that we have at the Commission and the
17 relationships we have with the, particularly the Air
18 Resources Board. Looking at bringing some of our R&D team,
19 our air quality expertise into some role in this program
20 where we can do some sampling. And really see what the
21 impacts on indoor air quality are with the various sort of
22 scenarios, and measure packages that go into the homes
23 across the state. So with that I think we'll learn a lot
24 and hoping to partner with the Air Resources Board on that.

25 So I'll sort of dig in a little further here.

1 This is a really big deal, a groundbreaking program. It's
2 obviously large sums we're talking about, pushing out into
3 existing buildings towards the communities, into the
4 communities that most need these resources. And these, I
5 think we all agree we need to be at the front lines. That
6 those communities need to be at the front of the line when
7 it comes to building decarbonization in the state and
8 public participation in it. It'll contribute to getting
9 the supply chain moving, and our going towards a goal of 6
10 million heat pumps by 2030.

11 But, you know, the math is pretty stark. Some of
12 the average costs that we've heard today, and that we've
13 looked at within the Commission, a half a billion dollars,
14 \$600 million divided by say \$20,000 per unit say, just for
15 example, that's 30,000 homes. And we have several million
16 homes at least that need these kinds of interventions. And
17 so it really is just a down payment.

18 But one exciting aspect of the program will be
19 the partnerships between the administrators and community-
20 based organizations. And I think it'll allow for really
21 effective engagement and learning with community residents.
22 And I think the idea is that we put ourselves in a position
23 to go to the Legislature. To look for different funding
24 sources to build bridges into the private sector as we kind
25 of move up market as well to bring in a variety of sources

1 of funding. The more public monies we can bring, to be
2 able to subsidize this going forward the better obviously.

3 But we need to put ourselves in a position to
4 argue persuasively that not only is it having equity,
5 positive equity outcomes, that it's actually being
6 effective at saving energy. And not increasing people's
7 energy bills and reducing greenhouse gas emissions. So
8 getting rid of onsite combustion is key to that last goal.

9 So we're trying to find a balance with all these
10 goals. And again eyes wide open going forward. And again,
11 we're thankful for the robust stakeholder engagement. And
12 really want to encourage continued participation from
13 everyone. And we'll continue to listen and be nimble in a
14 programmatic approach and adjust the guidelines as
15 appropriate.

16 Finally, I did want to highlight and just make
17 some comments on the issue that Mr. Calabrese brought up at
18 the outset. Excuse me. There is an issue with sort of the
19 -- I think we've had a lot of productive conversations with
20 all the manufacturers including last week at the summit.
21 The variable refrigerant flow, the variable speed heat
22 pumps are really innovative and inherently efficient and
23 sort of positive technology for the reasons Mr. Calabrese
24 specified. Other manufacturers also make variable speed
25 heat pumps and they do have advantages.

1 And we've heard that from OEMs and other
2 stakeholders. That the sort of one size fits all approach
3 to the metrics, that sort of determine eligibility for heat
4 pumps in the Equitable Building Decarb Program, may be
5 problematic. So we're aware that there may be sort of
6 tradeoffs with system efficiency and equipment sizing and
7 refrigerant quantities and materials.

8 From using this consortium for energy efficiency,
9 or this EEE -- EER, the Energy Efficiency Ratio metric, so
10 that's what this is really about. Unfortunately though
11 those metrics are the standard industry practice. And so
12 the tax credits revolve around those metrics, and most
13 utility programs use those metrics. And so without having
14 sort of an alternative fully fleshed out we really are kind
15 of boxed in a little bit in the near term to be using those
16 metrics. They do a reasonable job, but they have some
17 drawbacks.

18 So we know that some utilities, including SMUD
19 have taken a closer look at this issue. And I understand
20 that SMUD does not require the EER2 metric be met for
21 incentives for either multistage or variable speed systems.
22 And they've done some data collection on that. And we're
23 working with them to gain access to some of that knowledge.
24 And we've received some data from Daikin and other
25 manufacturers that suggest that this may be the case more

1 broadly in the field.

2 So we're not in a position to make these changes
3 today in the guidelines. But we definitely are committed
4 to looking more closely at the impacts of the EER, and how
5 it may disadvantage variable speed heat pumps. And we'll
6 continue to meet with stakeholders and engage in an ongoing
7 process within the CEC, and with an Energy Star, which also
8 uses the EER2.

9 So that's where we are right now. But I think
10 there's a good conversation starting to -- I think we're at
11 step one or two of the twelve steps, which is kind of admit
12 you have a problem. And I think together we're going to
13 figure out if there's a better metric or how we can be more
14 inclusive with the equipment in the program going forward.
15 So I just want to really appreciate the OEM's participation
16 in sort of helping us sort out that issue. And I think
17 it's going to have national implications when we sort of
18 move forward with that conversation. So I think it's
19 important that we lead, and we plan to do so.

20 I think I'll just stop there. I really just want
21 to again, appreciate staff, and appreciate all the
22 stakeholders. This is definitely a village. It's kind of
23 a big village. And I think we really are going to be
24 holding hands tightly going forward for a number of years,
25 hopefully for many years going forward as we grow and

1 mature this program and find more ways to channel resources
2 to it.

3 With that I'll pass it back to the Vice Chair.

4 VICE CHAIR GUNDA: Thank you, Commissioner
5 McAllister. I know we have other comments from the dais,
6 but we also saw a couple more comments that we missed. So
7 back to Mona, to you.

8 MS. BADIE: Great. Thank you, Vice Chair.

9 We have one person online, Ericka Flores.
10 Ericka, I'm going to open your line up. Please spell your
11 name for the record, announce any affiliation. We're
12 asking for comments to be two minutes or less.

13 MS. FLORES: Thank you. Can you hear me?

14 MS. BADIE: Yes.

15 MS. FLORES: Oh, wonderful. Thank you so much.

16 I was skipped, but I'm here now. My name is Ericka E-R-I-
17 C-K-A, Flores F-L-O-R-E-S. I'm with the Natural Resources
18 Defense Council, NRDC, and we also collaborate within the
19 Healthy Homes Working Group. And collectively we submitted
20 comments a few months ago, over 25 pages with various
21 partners who also signed on to this letter with our various
22 holistic approach as to how we want this program to be
23 inclusive and work together.

24 I want to reiterate much of the gratitude that
25 various of my colleagues in the previous comments stated

1 and thank the CEC and of course, the Commissioners, for all
2 of your hard work invested in these guidelines. We are
3 pleased to see that much of the recommendations that were
4 previously offered were included within the guidelines.
5 And we offer that appreciation that this program has
6 outlined the guidelines that already -- is already one of
7 the most innovative in the country. And we recognize that.

8 We also want to recognize the inclusion of low
9 income households in this program, as one of the purposes
10 of this ambitious program is to be inclusive of the most
11 impacted communities in our wonderful State of California.

12 And lastly, as I said I want to thank the staff
13 for the efforts in setting up the committee meetings that
14 were held within the various different regions. And for
15 including a lot of the feedback in the guidelines that were
16 heard and shared during those discussions.

17 Now, while we understand that the guidelines that
18 have been already proposed, are quite inclusive and
19 ambitious, we know that there could still be room for some
20 improvement. And we want to certainly uplift and offer
21 what our partners here, (indiscernible) tenant rights
22 advocates in the labor community are uplifting. And we
23 strongly encourage the CEC to work closely with the
24 stakeholders to further improve the program.

25 We are also continue to be open and willing to

1 work with you all collectively to ensure that this program
2 gets implemented in an inclusive way, and that our
3 communities benefit from this program. So I just want to
4 thank you. And thank you for the opportunity to speak
5 given that public comment had already been closed.

6 Thank you, Commissioners and CEC staff. Have a
7 wonderful day.

8 MS. BADIE: Thank you.

9 That concludes the remaining comment. Back to
10 you, Vice Chair.

11 VICE CHAIR GUNDA: Thank you, Mona.

12 Commissioner Gallardo.

13 COMMISSIONER GALLARDO: Thank you.

14 So Commissioner McAllister, I wanted to add on to
15 the kudos that you heard from the public on the support for
16 how this program came about and what we're doing in adjust
17 - and what we already have adjusted. And I'm glad that
18 we're showing the Energy Commission can lead with equity
19 and does lead with equity, especially with this program
20 with "equitable" in the in the name.

21 So I wanted to ask you -- I have a few questions
22 that might go to Diana or even possibly to you,
23 Commissioner McAllister. So you did mention that we're
24 going to be doing a lot of learning, a lot of listening,
25 which is really important in this type of program. And we

1 will be willing to make adjustments. I would like to know
2 if there's a specific timeline you have for evaluation and
3 adjustments, course corrections, whatever you want to call
4 it. I think that would be really helpful to have a sense
5 of when we plan to do that given all of the great ideas we
6 heard here, during the meeting, of some improvements that
7 we could make.

8 And I have a few other questions, but we'll start
9 with that one.

10 COMMISSIONER MCALLISTER: Great. Maybe I'll just
11 jump in. So there's no sort of fixed requirement or
12 timeline to update the guidelines. But typically what
13 happens is early on in any program - I mean, this was the
14 case with the NSHP and other programs, that a lot of
15 learning happens pretty quickly. And so the bucket gets
16 full relatively early on. And then so the first couple or
17 even few guideline updates come relatively quickly. Within
18 a few months, say the first update.

19 And then over time the kinks get worked out of
20 the system, and the program kind of hits its stride. And
21 then future updates can be farther apart. But we kind of
22 play that by ear and listen to stakeholders and figure out
23 what's necessary. If there are really critical issues that
24 need to get changed obviously we prioritize those. So
25 that's the plan.

1 COMMISSIONER GALLARDO: Okay. I see Diana is up
2 at the podium. Do you want to respond as well?

3 MS. MANETA: Sure. Thank you, Commissioner and
4 to Commissioner McAllister as well. I guess in addition to
5 Commissioner McAllister's comments about guidelines updates
6 I wanted to mention that in terms of sort of learning from
7 the information we gathered through the program, we are
8 developing right now as we go through solicitations,
9 contracts, and get sort of all the pieces in place, we'll
10 be developing exactly what those systems and structures
11 look like. But the concept is to really be collecting and
12 evaluating the information that we collect from the program
13 in an ongoing way.

14 So not wait until six months or a year or
15 something and then look and see how did we do. But we have
16 interval meter data. So some of that we -- on an ongoing
17 basis, on a regular basis, we can really see what are the
18 impacts we're having on people's bills.

19 We'll be doing -- there'll be surveys of
20 participants and all of that, so kind of taking that into
21 account.

22 Again, I don't have a specific timeline for you,
23 but just wanted to share the concept of continual
24 opportunities for improvement of the program.

25 COMMISSIONER GALLARDO: Okay. I do support that

1 concept of continual improvements. I also think it helps
2 to have a timeline, so that other folks who are external to
3 the Energy Commission also know when they'll be able to
4 participate more deeply.

5 And on that front, I also had a question about
6 the engagement. So one, I want to give kudos to Deana,
7 because I was personally involved with her in figuring out
8 engagement opportunities. So Deana, thank you for being so
9 proactive on that, with this program in particular, and
10 others that you and I were working on.

11 And I also wanted to emphasize that the Energy
12 Efficiency Division also participated in the beginning and
13 thank them for all they did.

14 So a lot of the engagement I think was really
15 helpful, and it showed in the changes that the program has
16 made already. And I'm wondering if there's any possibility
17 of having some type of more structured advisory group, or
18 some mechanism where you will be able to get that continued
19 -- continue that engagement and get that really valuable
20 input from folks like the BEEP Coalition, who showed up
21 today. And others who have been providing really good
22 feedback for us.

23 MS. CARRILLO: Thank you, Commissioner Gallardo.
24 This is Deana Carrillo, Division Director of RREDI. Agree
25 that community engagement one, as we look at equity for all

1 of our programs, but specifically for this program, is
2 essential. We were very intentional and focused on being
3 place-based. Making sure that we had language and
4 appropriate and communications.

5 To date we have not considered -- well, let me
6 take a step back. The way the program is structured at
7 this point in vision is to have the guidelines being an
8 umbrella document, which will be further delineated within
9 contracts that we'll have with our third party
10 administrators. Those will a) require community-based
11 organizations to be part of that team. So it is very much
12 from the bottom up to the extent that we can with the
13 statewide program. And be place-based as we look at
14 initial focus communities. So those community-based
15 organizations will be part of that administrative team.
16 And we'll work through that process.

17 Happy to, just on the other note of the
18 guidelines, I'm happy to have a time certain if we felt
19 like that was appropriate, for a reflection point. This is
20 a one of a kind, first of its kind, program in the nation
21 that we have done. So we anticipate to have lessons
22 learned. And as being lifelong learners here at the Energy
23 Commission we'll incorporate that.

24 We do rely on our DACAG as a former structural
25 piece, adding additional structure on top of that so early

1 in the program. Staff has not recommended to date, but I'm
2 open to the discussion and the focus of the Commissioners.

3 COMMISSIONER GALLARDO: Okay, one last note on
4 that. If the feedback, you were going to rely on those
5 community-based organizations that are involved with the
6 administrators, I think that's fantastic. Is there going
7 to be some structure there? Will you have them convening
8 regularly, all three of the region CBOs, or is it something
9 else?

10 MS. CARRILLO: Yeah, good question. Those are
11 some elements that we're still working out with that
12 contract. I think there'll be lessons learned across the
13 regions and plus with within the regions. California is a
14 very big state. I think another opportunity or an
15 opportunity for input along the way is having that open
16 door policy with all of our community-based organizations.
17 And working with PIO and others to figure out how we can
18 provide that regular structure for all of the Energy
19 Commission programs outside of a structured process like
20 the DACAG.

21 COMMISSIONER GALLARDO: Okay, so that's the
22 Office of the Public Advisor Energy Equity and Tribal
23 Affairs that Deana is referring to, to be partnering with
24 them.

25 MS. CARRILLO: Thank you.

1 MS. CARRILLO: Okay. Sorry for that shorthand on
2 my end.

3 COMMISSIONER GALLARDO: No, it's okay. I just
4 want to make sure the public knows what we're talking
5 about. And then I have a final question. And then I'll
6 cede here.

7 So I think we addressed several of the comments
8 that came up from the public. Which and I wanted to thank
9 all of the commenters for their contributions here and
10 their participation. So like the remediation cost cap, the
11 income criterion, the tenant protection enforcement.

12 The one thing that we didn't -- or at least I
13 didn't catch it -- was on the supplier diversity side. So
14 I think it was by the Greenlining Institute that mentioned
15 that we'd be tracking the vendors that will be involved.
16 So women owned businesses, diverse owned businesses, etc.
17 I'm just curious if we're requiring any reporting on that
18 or is it just tracking or how will that go about? If you
19 could talk a little bit about that I'd appreciate it.

20 MS. CARRILLO: Yeah, sure. Good question. Oh, it
21 is a team effort here at the Energy Commission. Christine?

22 MS. CALLOPY: I love that. Christine Collopy,
23 Deputy Director of RREDI. There was a bill actually passed
24 this year, the Senate Bill I think 306. And that does
25 actually require us to report on this program to the

1 Legislature. So there will be a reporting mechanism that
2 we'll be doing every year from this point forward.

3 COMMISSIONER GALLARDO: Excellent. Thank you.
4 All right, go ahead.

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

7 Commissioner Monahan.

8 COMMISSIONER MONAHAN: Well, Commissioner
9 Gallardo asked a few of the questions I too was going to
10 ask, so thank you. And I also just want to thank all the
11 many groups that came and have been participating
12 throughout this whole process. I mean it was really
13 heartening to just hear how much engagement there is across
14 the entire state it appears. And how receptive the team
15 has been to listening to feedback, adjusting. And I think
16 this also commitment to learning and adjusting further is
17 really important.

18 So I just want to thank everybody who has been
19 involved. Coming at this from a deep, passionate and deep
20 goal of really helping lower-income families, disadvantaged
21 communities, to benefit from this clean energy transition.

22 And I know the team is working hard to try to
23 ensure that we have as many homes -- that we are able to
24 reach as many homes as possible. So being good fiscal
25 stewards, but also with this recognition that it's a bit of

1 a Pandora's Box when you go in and you do these upgrades
2 and so some flexibility and learning.

3 One of the things I talked with Diana and the
4 team about was EV charging. I know EV charging right now
5 is not part of that, or preparing for EV charging isn't
6 part of that. That would also be something I would love
7 to, as you're going out and learning, to learn more about
8 whether these electrical upgrades could facilitate EV
9 charging in the future.

10 In terms of saving families money, that's how you
11 do it. If you switch out of an electric -- switch out of a
12 combustion, traditional gasoline-powered vehicle into an
13 electric vehicle you're going to save a lot of money. And
14 that might be a way to actually ensure that lower-income
15 families are benefiting even more from this transition to
16 zero emission.

17 So just that's, I think, all I want to say. But
18 it's really nice when we have these types of items on the
19 agenda where you feel like we can make a difference in
20 people's lives. We want to make a difference in people's
21 lives. And we want to learn from our mistakes. We want to
22 not be afraid of making mistakes and adjusting as we go.

23 COMMISSIONER MCALLISTER: Can I just jump in
24 really quick on that?

25 VICE CHAIR GUNDA: Go ahead, Commissioner

1 McAllister.

2 COMMISSIONER MCALLISTER: Yeah, I did want to
3 also note, it hasn't come up yet, but I wanted to note that
4 we are engaged with the PUC to include some consideration
5 as we sort of use an analytical contractor that we now have
6 on contract to sort through some of the usage patterns and
7 load shapes. And sort of trying to identify where the AC
8 load might have a big efficiency benefit from converting to
9 a heat pump, that kind of thing. And identify communities,
10 and sort of which criteria they meet, et cetera. So really
11 kind of slice and dice and just sort of get the lay of the
12 land.

13 Part of that is their headroom on the
14 distribution grid. And so we're going to do that overlay
15 and just see how that how that looks. And the idea,
16 obviously being that we prefer to not trigger major
17 upgrades in a given piece of the distribution grid if we
18 can avoid that. We're putting a bunch of new electrical
19 equipment on that circuit, and if it's already really
20 budding right up against the capacity of that circuit, we
21 want to try to consider those costs. And that could
22 potentially trigger a big delay for -- at the distribution
23 utility.

24 So not hard and fast rules, but just
25 considerations that I think again we're going to just learn

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1 a lot about the impacts of electrification, a very
2 practical, grounded way. And be able to make better
3 decisions about how we invest these and other program
4 resources.

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

7 I just had a couple of quick comments I just
8 wanted to note. I think I want to just begin by extending
9 my gratitude to you Commissioner McAllister. I think the
10 leadership of doing things well all starts from who's
11 leading it. And you've been really kind of embracing this
12 idea of embodied wisdom of a robust stakeholder process
13 that allows for a lot of diverse opinions to come up and
14 balancing them through the policy lens that we have. So
15 just thank you for your leadership.

16 Just kind of hearing from the stakeholders today
17 commenting that they recognize everybody, started with just
18 being grateful to the process. So I just want to uplift
19 that. Just everybody noted the good process that we've
20 done. And it kind of imparts to Christine here, Diana, and
21 Deana Carrillo, all the leadership for making this happen
22 really, really well.

23 Diana, I thought your responses to all the
24 questions were very thoughtful. In kind of noting what can
25 be done and how we could learn from this and then continue

1 to reform our process. I also had questions along the
2 lines of Commissioner Gallardo. And I think we've heard
3 from you that the early refinements will be quick and
4 robust.

5 And I think one piece that I just wanted to
6 uplift to the point for me to just think through is this
7 particular program has an incredible opportunity to set a
8 national stage and a template. And what I think would be
9 an unfortunate thing to happen is if we kind of wait too
10 long for the refinements to happen. Some of those
11 beneficiaries that should really benefit from this program
12 could forever be lost, right? So just kind of making sure
13 that we do everything we can to capture the benefits for
14 people that really, really need it, even if it means a lot
15 of costs. So how do we do that?

16 The other piece that goes along the lines, I
17 think just the equitable decarb as a whole, has taken the
18 point of not just kind of this trickle down incentive
19 mechanism. Lets kind of fund certain classes, so it will
20 ultimately transform the market. But it's taking the idea
21 of soaring up. That's just kind of building up from the
22 bottom to help transform the market. And I just wanted to
23 give a big kudos to the Governor, the Legislature and the
24 entire leadership here for pushing that opportunity for to
25 really lift up.

1 So I think the concerns I had around the
2 questions that were raised by the stakeholders were
3 answered well in terms of making sure that we'll continue
4 to inform this with the lessons learned. So just thank
5 you. Thank you for all the work and good luck. I know
6 it's a very difficult program to put out. So I'm looking
7 forward to tracking all of your work and supporting you all
8 to succeed.

9 So with that I think we don't have any further
10 comments. Commissioner McAllister, would you like to move
11 the item?

12 COMMISSIONER MCALLISTER: Well thanks so much,
13 Vice Chair. And I would just reiterate the gratitude to
14 the Legislature and the Governor for just -- I mean this
15 really started with the Governor. These are big numbers.
16 And it's unprecedented, really. We're the state that's
17 doing the most here and really getting ahead of the federal
18 IRA investment, and really trying to plan for it with a
19 with a program of our own.

20 And right now I'm at the NASEO, the National
21 Association of State Energy official Annual Meeting in
22 Portland. And just the leadership that we are kind of
23 embodying, I think demonstrating, really does move the
24 needle across the country. I mean, it's just very, very
25 clear.

1 And so this program has to succeed. We've got to
2 succeed with this program. That's why we have to be so
3 intentional and so inclusive, because that's the way we
4 succeed. I firmly believe that. And I really appreciate
5 your and the Chair's and all of your support for that
6 robust stakeholder process. Really, it makes a huge
7 difference. So thank you.

8 And with that, I will move Item -- this is 7,
9 right? Move Item 7.

10 VICE CHAIR GUNDA: Do we have a second?
11 Commissioner Gallardo.

12 COMMISSIONER GALLARDO: I second Item 7.

13 VICE CHAIR GUNDA: Okay. We will now take the
14 vote. Commissioner McAllister.

15 COMMISSIONER MCALLISTER: Aye.

16 VICE CHAIR GUNDA: Commissioner Gallardo.

17 COMMISSIONER GALLARDO: Aye.

18 VICE CHAIR GUNDA: Commissioner Monahan.

19 COMMISSIONER MONAHAN: Aye.

20 VICE CHAIR GUNDA: I vote aye as well. The Item
21 passes 4-0. Thank you all.

22 So I know we have -- we've just completed Items 7
23 of the 23 I think we have. Pretty lengthy, so I think
24 we're going to take a break of 40 minutes roughly. So
25 let's kind of come back at 1:15. Thank you all.

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1 (Off the record at 12:37 p.m.)

2 (On the record at 1:19 p.m.)

3 VICE CHAIR GUNDA: Thank you all. Welcome back.
4 We'll start with Item 8, Flexible Demand Appliance
5 Standards for Pool Controls. Welcome, Nich to present.
6 Thank you.

7 MR. STRUVEN: Hello, Commissioners. I'm Nich
8 Struven, the Senior Mechanical Engineer for the Appliances
9 Branch. With me today is Peter Strait, Appliances Branch
10 Manager and Michael Murza from the Chief Counsel's Office.

11 I will be presenting for your consideration our
12 proposed regulations for flexible demand standards for pool
13 controls and CEQA determination. While there are some
14 devices on the market today that provide consumers the
15 ability to adjust or shift the time of operation, this
16 standard is the first that sets a baseline for a device
17 that enables load shift to incorporate bidirectional
18 wireless communication, connectivity, cybersecurity
19 protocols, and consumer consent protections.

20 The scope of the proposed regulations are pool
21 controls that are consumer products and include devices
22 that control the basic operations of a pool's electric
23 components. This slide shows some examples of pool
24 controls. Pool controls handle the scheduling and
25 operation of the pool filter pump, the pressure cleaner

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1 booster pump, the pool heater, the pool chlorinator and
2 other pool features like lights and fountains.

3 A required preconfigured or default pool control
4 schedule will help guide the consumers to hours of
5 operation that avoid GHG emissions and help consumers avoid
6 peak electricity prices. Consumers may override the
7 default schedule to meet their specific pool needs.

8 Pool controls are required to have the capability
9 to communicate wirelessly, for example to the consumer's
10 home Internet or mobile phone. By doing so, the device can
11 receive instructions and information from remote sources,
12 including from the CEC Market Informed Demand Automation
13 Server also known as MIDAS.

14 MIDAS is a rate database that contains valuable
15 data that the pool control can use to optimize an operating
16 schedule. Some examples are a control algorithm that
17 schedules pool operations at times when the GHG emissions
18 associated with electricity generation are low, or a
19 control algorithm that schedules operations during times of
20 lower priced electricity, or a control algorithm that does
21 both.

22 The requirement for two-way connectivity
23 facilitates valuable data transfer, allowing consumers to
24 make informed decisions and to automate the use of their
25 equipment. It also allows the consumer to enroll in a

1 utility or a community choice aggregator's load flex
2 program, where the utility or CCA automates the device for
3 the consumer.

4 The proposed regulation could avoid about 33,000
5 metric tons of CO2 equivalent in the first year. The
6 proposed regulation in the tenth year could avoid about
7 394,000 metric tons of CO2 equivalent. Assuming a single
8 mature tree may take in about 50 pounds of carbon dioxide
9 per year, the proposed regulation is about equal to the
10 amount of carbon dioxide absorbed by 17 million mature
11 trees. The avoided emissions due to the regulation is also
12 roughly equivalent to avoiding the average annual emissions
13 of 85,000 internal combustion engine passenger vehicles.

14 In the tenth year, after the effective date of
15 this standard, the avoided GHG emissions directly
16 attributed to the pool controls standards is estimated to
17 be more than half a percent of the total statewide GHG
18 emissions.

19 Staff estimates a total energy load shift
20 potential of more than 64 gigawatt hours in the first year
21 of the appliance standard and more than 682 gigawatt hours
22 in the 10th year of the appliance standard for the state.

23 The load shift potential from pool controls could
24 change the need to import electricity during 4:00 to 9:00
25 p.m. or reduce the need to run a fossil fueled power plant,

1 many of which are often located in disadvantaged and low-
2 income communities. Staff estimates about 564 megawatts of
3 power being shifted during the tenth of the standard,
4 during the 7:00 p.m. hour of a California summer evening.
5 To put this into perspective 564 megawatts is about one-
6 quarter of the power capacity of Diablo Canyon Power Plant.

7

8 This slide is an example of what a default
9 schedule could look like for a single pool with a variable
10 speed pool pump. The essential pool operations start at
11 9:00 a.m. and are completed by 3:00 p.m. During the
12 electricity grid peak hours, the essential operations have
13 automatically been shifted and consumers still have the
14 capability to override the default schedule to meet their
15 specific pool needs.

16 The proposed regulation also has the potential to
17 improve grid reliability and reduce the need for new short
18 duration electricity generating power plants sometimes
19 called "peaker plants."

20 This slide is an example of how a connected
21 device can respond to a Flex Alert. If the pool equipment
22 is running when the alert is called, the device can pause
23 operation for the duration of the alert. If enough pool
24 controls pause their operations, this could result in
25 avoiding the start-up of a peaker plant. Next slide,

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1 please.

2 The default schedule alone is estimated to save
3 around \$100 per year. The consumer receives a full return
4 on the investment within one year of operation. Consumers
5 on a time-of-use rate would save an estimated \$1,131 over
6 the typical 10-year life of the pool control.

7 The proposed regulation will go into effect on
8 September 29, 2025 for all new pool controls manufactured
9 on and after this date.

10 Some of the performance requirements we would
11 like to highlight today are the standard requires an
12 optimized default schedule. The default schedule sets pool
13 operations to a time of the day when renewable electricity
14 is plentiful and helps consumers avoid using electricity
15 when prices are high.

16 The standard requires wireless connectivity.
17 This allows pool controls to communicate the appropriate
18 information needed to automatically respond to a Flex Alert
19 or participate in a third-party load shifting program only
20 with the consumer's consent.

21 The standard requires consumer consent
22 protections. This ensures flexible demand appliances
23 obtain consent prior to the collection of consumer data.

24 The standard requires cybersecurity protection.
25 This ensures flexible demand appliances contain a minimum

1 set of cybersecurity features that protect the consumers'
2 devices and personal information.

3 We are requesting that the Commission adopt the
4 CEQA exemption determination and the proposed regulations
5 for flexible demand appliance standards, including specific
6 standards for pool controls with an effective date of
7 September 29, 2025 and the CEQA exemption determination.

8 Thank you. We are available for any questions.

9 VICE CHAIR GUNDA: Thank you so much, Nich.

10 We will move to public comment.

11 MS. BADIE: Thank you. This is Mona Badie, the
12 Public Advisor for the California Energy Commission. The
13 Energy Commission welcomes public comment on Item 8 at this
14 time. We will take public comment in the room first and
15 then we'll go to Zoom. Just giving some advanced warning,
16 if you're on Zoom you can sign up to make a public comment
17 now by just using the raise hand feature. And if you're on
18 the phone, you can press *9 and we'll allow that queue to
19 develop. But first I'll go to the room.

20 We've asked folks to use the QR code, or visit
21 the Public Advisor table in the back of the room if you'd
22 like to make a comment. But I also will look around and
23 see if there's any raised hands as well. Let's see. We do
24 have one comment in the room, so Mark Alatorre if you'd
25 like to approach the podium, please. We ask that you spell

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1 your name for the record, announce any affiliations you'd
2 like to share. And we're asking for comments to be two
3 minutes or less. You may begin.

4 MR. ALATORRE: Hello, my name is Mark Alatorre.
5 That's M-A-R-K A-L-A-T-O-R-R-E. And I'm with PG&E, but I
6 am here to speak on behalf of the California IOUs in total.
7 And I'd like to thank -- we appreciate the CCS efforts to
8 put forth California's first flexible demand planning
9 centers to reduce greenhouse gas emissions and support a
10 clean and reliable grid. We support flexible demand
11 appliance standards requirements for secure, bidirectional,
12 reliable and open standard base communication that allows
13 devices to receive and respond to demand flexibility
14 signals from utilities, authorized third parties, or the
15 CEC's market informed demand automation server.

16 Further, we recommend that the CEC collaborate
17 early and often with utilities, manufacturers, regulatory
18 agencies and other stakeholders in the development of
19 future flexible demand appliance standards to ensure that
20 the standards are consumer friendly. And that they support
21 a balanced and reliable grid. And that they realize the
22 goal of reducing greenhouse gas emissions by a demand
23 flexibility.

24 So we thank the CEC for the opportunity to
25 comment on this topic and look forward to continued

1 involvement in future rulemakings. Thank you.

2 MS. BADIE: Thank you.

3 I'm just looking for any raised hands in the
4 room. I'm not seeing anyone, so I'm going to transition to
5 Zoom. So again if you're on Zoom and you'd like to make a
6 comment please use the raise hand feature on your screen.
7 Or if you're joining by phone press *9 to notify us you'd
8 like to make a comment.

9 First up we have Philip Escobedo. I'm going to
10 open your line, Philip. Please spell your name for the
11 record, announce any affiliations you'd like to share, and
12 we're asking for comments to be two minutes or less.

13 MR. ESCOBEDO: My name is Philip Escobedo, P-H-I-
14 L-I-P E-S-C-O-B-E-D-O. And I'm with Fluidra, a pool
15 equipment manufacturer. And we appreciate the opportunity
16 to participate in the rulemaking process.

17 As a leading manufacturer of connected pool
18 controls, we support the efforts to move the industry into
19 the energy efficient future with flexible demands
20 standards. And we have made several comments, proposals,
21 and requests for clarifications on the proposed regulation
22 in an effort to make a very practical, effective, and
23 meaningful pool control standard. These written comments
24 have already been submitted for public records, so I won't
25 go through them all now. But there are two key points I

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1 wanted to emphasize on this final proposal.

2 One, an enforcement date of 2025 is way too fast
3 for our industry. Though many of the regulations IoT
4 requirements may seem rudimentary, and standard on
5 connected devices like cell phones, computers, smart TVs,
6 remember we're not Apple or Google who have five
7 generations of technology already developed and ready to
8 obsolete what's currently in the market. We're pool
9 control manufacturers and our IoT resources are limited.

10 Federal DOE rules have given us four or five
11 years compliance date for a new rule. We believe that is a
12 much more practical timeline for industry to develop, test,
13 validate certify, and launch a new generation of pool
14 controls. We don't want quality problems plaguing our
15 consumers due to precipitous deadlines.

16 And two, we believe the final rule should allow
17 for both connected, and what you define as connected ready
18 devices, to comply with this final rule. A connected ready
19 device is something that is readily connectable via
20 separate hardware. In our industry that means either Wi-Fi
21 connection through the LAN or RS 45 LAN port on a on the
22 pool control itself.

23 Some consumers may not choose to connect their
24 pool product. They don't have to connect it, so they don't
25 have to spend the money for this additional hardware as

1 long as it's ready to be connected. For those who choose
2 to have it, I think that meets the intent and the spirit of
3 the rule and won't burden the consumer. Manufacturers make
4 more money by forcing the consumer to buy, but I think
5 that's the wrong approach.

6 And we appreciate it, so I think we look forward
7 to further presentation. Thank you.

8 MS. BADIE: Thank you.

9 Next we have Justin Wiley. Justin, I'm going to
10 open your line. Please spell your name for the record,
11 announce any affiliation, and we're asking for comments to
12 be two minutes or less.

13 MR. WILEY: Thank you very much. Good afternoon.
14 My name is Justin Wiley. That's J-U-S-T-I-N W-I-L-E-Y.
15 And I'm with the Pool and Hot Tub Alliance or PHTA. We
16 represent more than 3,600 company members and over 11,000
17 individual members nationwide, including manufacturers.
18 One of which you just heard from, a pool pumping equipment
19 controls.

20 PHTA has a long history working with the
21 California Energy Commission and looks forward to the
22 opportunity to continue our relationship during the
23 inaugural implementation of flexible demand appliance
24 standards. Our goal is to provide consumers a quality
25 product and user experience that is compliant and supports

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1 the California in the Commission's effort to reduce energy
2 demand and lessen greenhouse gas emissions.

3 During this rulemaking process, we've greatly
4 appreciated CEC staff and their willingness to work with us
5 to incorporate suggestions we submitted in our April and
6 July round of comments. We also submitted comments on the
7 second 15-Day proposed regulatory language suggesting
8 further improvements. For the entirety of those
9 suggestions I'd refer the Commission to our comments dated
10 September 18.

11 But in the remaining time, I'd like to take the
12 opportunity to highlight a request for additional time to
13 design, test, and manufacture compliant market ready
14 products. The average product development time for
15 manufacturers is approximately four years with a limited
16 number of compliant products or products on the market.
17 We're asking the Commission to consider that four year
18 effective date. This four year date development timeline
19 was recently recognized by the Department of Energy in
20 their dedicated purpose pool pump motor rule for this small
21 motor category where few compliant products currently
22 exist. We're simply asking for the same consideration.

23 In conclusion, we value the hard work and
24 countless hours that CEC staff has put into writing and
25 refining the proposed rule as we pivot toward the

1 implementation process for the first round of flexible
2 demand appliance standards. PHTA appreciates the
3 opportunity to work with CEC on issues that may arise.
4 Thank you very much for your attention.

5 MS. BADIE: Thank you.

6 That concludes public comment back to you Vice
7 Chair.

8 VICE CHAIR GUNDA: Thank you, Mona.

9 Moving to Commissioner discussion. Commissioner
10 McAllister, would you like to start?

11 COMMISSIONER MCALLISTER: Yes, great. Thanks,
12 Vice Chair.

13 So Nich, thanks so much for that presentation. I
14 really, really appreciate it. And you know, this proposal
15 has been a little bit of a winding road. As the commenter
16 said, we've had a number of rounds of back and forth and
17 gone through a lot of really tricky issues actually. This
18 is the first one as you all know, the first one under our
19 Flexible Demand Appliance Standards Authority. So this is
20 really pretty momentous.

21 I did want to, before I make any additional
22 comments, I wanted to just ask Nich and/or Peter if you
23 have any responses to the points about the effective date?

24 MR. STRAIT: Hello, Commissioner, this is Peter
25 Strait. For the court reporter, P-E-T-E-R S-T-R-A-I-T.

1 We definitely recognize that industry has a
2 natural cycle of product development and that where we
3 implement this effective date, some folks will be halfway
4 through that process and be ready to have a product to
5 market by that 2025 date. Others may be further behind.

6 We recognize that the feedback we've received
7 consistently from Fluidra and from PHTA has been that they
8 need more time to comply.

9 We also recognize that California is in a
10 situation where we need to put the pedal to the metal on
11 measures that help to address our current transition to
12 renewable energy and decarbonizing of our electrical grid.
13 So we are trying our best to balance those equities.

14 We will have opportunities to revisit this
15 regulation as we conduct additional rulemakings for future
16 products. So we can continue to have that conversation
17 with the representatives of the pool control industry. But
18 over the several iterations of these express terms, we feel
19 we have done what we can to both listen to and follow the
20 direction from the Energy Commission and from our
21 Governor's Office for relative policy. And those concerns
22 about making sure that Californians have access to
23 equipment. That we're not causing equipment shortages, or
24 causing price spikes, while still delivering these benefits
25 to Californians as rapidly as we can.

1 COMMISSIONER MCALLISTER Great. Thanks, Peter.

2 So I do want to acknowledge the speakers. I
3 really appreciate your being with us. Mark Alatorre, you
4 know, welcome back to Commission. Good to hear your voice.
5 And Mr. Escobedo and Mr. Wiley, I really appreciate your
6 participation all along the way.

7 And I wanted to just sort of provide a little
8 more context for this. So the enabling legislation from
9 Nancy Skinner is, I believe it's four plus years ago now.
10 And we have a number of product classes that we're looking
11 at. The staff has done a really comprehensive view of the
12 landscape. And so this is the first one.

13 Part of the reason it's the first one is that it
14 is actually a little more straightforward than some of the
15 other ones. Next up is probably water heaters, maybe
16 behind-the-meter batteries. There's a number of
17 technologies that we could be developing flexible demand
18 appliance standards for, and actually staff as far down the
19 road on those other categories as well.

20 So as the first one we really had to work through
21 a number of issues around the sort of the cyber issues, the
22 communications, language, a number of issues that even
23 issues that weren't that relevant for pool controls, but
24 that staff had determined to be relevant for some of the
25 categories that are coming up. So this has been quite a

1 long lift. I would argue that it's been pretty clearly
2 coming for quite a while, so it shouldn't be a surprise.

3 At the same time, as staff really pushes forward
4 on additional product categories, they will take a similar
5 format, similar form, and follow a similar process to this
6 one, and treat similar issues and have a similar structure.
7 That's the idea. And so as implementation proceeds on this
8 item the idea is that we can create situational awareness
9 along the way. And if needed, we can revisit the couple of
10 issues that that the industry representatives brought up
11 today.

12 I certainly understand that this is not - you
13 know, these are global multinational large billion dollar
14 corporations and so sympathetic to that approach. And
15 certainly we want these companies to still be able to
16 service the marketplace. And you know, the idea is to
17 certainly not prevent that from taking place. But I think
18 there has been quite a bit of projection that this was
19 coming. So I'm are now comfortable with where it's landed.

20 VICE CHAIR GUNDA: Thank you, Commissioner
21 McAllister.

22 Commissioner Gallardo?

23 COMMISSIONER GALLARDO: Thank you.

24 Commissioner McAllister, congratulations on
25 getting this far and thank you to the staff for such a

1 great presentation. It was really helpful to me. I didn't
2 grow up with a pool, so I'm not as familiar. But what I
3 wanted to highlight, Nich, is you did a great job of
4 showing us the potential benefits and impact. Particularly
5 with how pools can contribute during a Flex Alert to avoid
6 us turning on a peaker plant. That is major, and so I
7 wanted to thank you for giving us that. And so I'm really
8 excited about this.

9 Again, I'm not so familiar with pools, but I hope
10 to have one in the future. It's really hot where I live.
11 It feels like a luxury, but almost a necessity when you're
12 living in extreme heat and have kids. So thank you all in
13 there.

14 COMMISSIONER MCALLISTER: I do actually have a
15 couple more comments I wanted to make that just -- and this
16 is kind of along the lines of what I'm sure Commissioner or
17 Vice Chair Gunda is thinking. Is this can get us a slice
18 of what we need to meet the load shift goal under AB 846
19 that we adopted not that long ago, a few months ago. You
20 know, a tenth or so, I mean a big chunk of the 3,000
21 megawatts of the load management or the permit load
22 shifting part of that goal.

23 And so you know, it's an important load across
24 the state. It really is ripe for demand management. It is
25 a pool that is -- that pool pumps are highly discretionary

1 in terms of the time of their operation. And so this is a
2 logical place to start.

3 And so I just wanted to sort of reiterate, you
4 know, that this really does represent a major milestone in
5 our state's effort to ensure technologies in homes and
6 businesses support the state's clean energy priorities
7 while also saving consumers money. It's very cost
8 effective as you've seen. Incremental cost is swamped by
9 the savings, especially as we go to more severe or sort of
10 time-of-use rates where the difference between on and off
11 peak is actually steeper and larger. So the savings
12 potential of it actually goes up over time. And so and it
13 actually can, you know, as the intent of AB 846 is the grid
14 stability and the grid reliability support that can come
15 out of this, it's really important.

16 And then also this is sort of if LMS -- on sort
17 of one hand you have the load management standards, and
18 MIDAS is sort of the other hand. This is a way to have the
19 equipment out there that can actually interface and use the
20 MIDAS signal in an automated way. And so these are
21 definitely coordinated initiatives that are moving forward
22 together. And as we get more product categories with
23 flexible demand standards we'll have more devices out there
24 that are ready to automate, for automated load shift.

25 So really does mean -- this does mean a lot. And

1 it'll only get, the comms and controls will only get more
2 less expensive and more pervasive over time.

3 And so in sum I just wanted to thank Nich
4 Struven, just a great job on the presentation. It's been
5 really been gratifying to work with you and the team. I
6 want to acknowledge Bruce Helft, Ho Hwang, Peter Strait,
7 thanks very much. I enjoyed your answers there, nice job.
8 And then Mike Sokol for his leadership on this, the Deputy
9 over the Efficiency Division. Thanks, Mike. Also Linnaeus
10 and Shai, (phonetic), Scott Blanc, Wilson Al Zafar,
11 (phonetic) Corinne Fishman, Mike Murza in CCO and Kirk
12 Oliver, also in the Chief Counsel's Office.

13 And then actually I wanted to acknowledge Sean
14 Steffensen and Pierre duVair who I understand are in the
15 audience there live. And I just wanted to -- they are not
16 on the team anymore and at the Commission, but I really
17 appreciate their dedication to this to really take keep it
18 going and moving forward while they were part of the team.
19 And really were key players in getting us to where we are,
20 so thanks a lot to both of you.

21 So with that I'll wrap up my comments. Thanks,
22 Vice Chair,

23 VICE CHAIR GUNDA: Yeah. Thank you, Commissioner
24 McAllister. Yeah, I don't want to repeat what you just
25 said, but I totally agree with kind of the points that have

1 been made.

2 And I just want to take the opportunity to
3 commend Nich for a really good presentation and the entire
4 team. And thank you for kind of sharing the awareness that
5 this has been four-and-a-half years in the making. And I
6 think that makes me feel comfortable with moving forward as
7 well.

8 But just the other piece that I want to reiterate
9 that you just said is the importance of demand flexibility
10 as an opportunity to continue to support the grid during
11 extreme events. And thank you so much for the work you
12 have been continuing to champion on all fronts,
13 Commissioned McAllister.

14 So with that I'm happy to move towards a vote.
15 Commissioner McAllister, would you like to move the item?

16 COMMISSIONER MCALLISTER: I will move Item 8.

17 VICE CHAIR GUNDA: Commissioner Gallardo?

18 COMMISSIONER GALLARDO: I second.

19 VICE CHAIR GUNDA: Great. We'll take the vote
20 now. Commissioner McAllister.

21 COMMISSIONER MCALLISTER: Aye.

22 VICE CHAIR GUNDA: Commissioner Gallardo.

23 COMMISSIONER GALLARDO: Aye.

24 VICE CHAIR GUNDA: Commissioner Monahan.

25 COMMISSIONER MONAHAN: Aye.

1 VICE CHAIR GUNDA: I vote aye as well. Thank
2 you. The vote is 4-0 and we'll move to Item 9.

3 MR. BOHAN: Great. Thank you, Commissioners. My
4 name is Drew Bohan. I'm the Executive Director of the
5 Commission. The next two items on your agenda deal with
6 Senate Bill X1-2. This bill was signed by Governor Newsom
7 in March of this year. It became effective in June and
8 your staff have been working very, very hard on it for the
9 last several months.

10 You will hear in the next item about several
11 features of this legislation. I want to turn your
12 attention to just one of those for this item that's before
13 you right now. And this is as the title implies,
14 concerning the maximum gross gasoline refining margin, and
15 whether or not it's a good idea for you. You're permitted
16 under the statute to determine that there is a maximum, and
17 that there should be a penalty imposed on refiners who
18 exceed that maximum.

19 Briefly, what the gross gasoline refining margin
20 is really quite simple. You take the average price of
21 wholesale gasoline sold by refiners, and you subtract the
22 average price of the crude that they bought to make the
23 fuel. You also subtract out the environmental program
24 cost, the low carbon fuel standard, and Cap-and-Trade. And
25 then you end up with a number. And we're going to talk a

1 little bit in this presentation about some of those
2 numbers.

3 This is a complicated question. Whether or not
4 this is a good idea is complicated. Let me ask my
5 colleague to flip to the next slide, please.

6 So the reason why this is a good idea that we are
7 recommending to you is as follows. We think that by
8 adopting this order, it permits staff to evaluate all the
9 issues and look very closely at the benefits and costs of
10 such a measure as contemplated by the statute. We'll have a
11 record of stakeholder input. We know there are folks out
12 there who think this is possibly very good for California,
13 others who are much more concerned about it. And we will
14 come up with recommendations. We will come back to this
15 body in the future and make a recommendation. Next slide,
16 please.

17 Let me first draw your attention quickly to the
18 graph you see. The blue line shows the price of gasoline
19 in California in 2022. It starts in March and you'll
20 recall the invasion of Ukraine caused a very quick upswing
21 in the price of crude. When crude goes up, gasoline prices
22 go up. It dipped a little bit, went up again in the
23 summer. Dipped way down. And as inventories, the amount
24 of fuel available in California got low in the late summer,
25 the prices got very, very high. And we came very close to

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1 setting a California high.

2 The orange bar shows this year. It's quite
3 different. Although you'll see starting in about August it
4 starts to -- the line starts to behave like 2022 and the
5 prices go up. The downward drop corresponded very, very
6 closely with Governor Newsom announcement of moving to
7 early winter blend. Every year on November 1 refiners are
8 permitted to move to a higher vapor pressure gasoline,
9 because it's not so hot outside. This basically increases
10 supply very, very quickly by 10 percent. As a consequence,
11 higher supply leads to lower prices, so you can see that
12 relationship showing up in both of these graphs.

13 So your challenge when deciding whether to
14 establish margin and impose a penalty is stated, and it's
15 quoted here in the upper left of the slide. You must
16 determine that the likely benefits to consumers outweigh
17 the cost to consumers.

18 And the factors that the statute explicitly
19 directs you to consider are one, the impact of such a move
20 if you were to impose a penalty on supply demand. And the
21 impact on the prices at the pump. So those are the two
22 touchstones we look at. The statute permits us to look at
23 any other factors we deem relevant. And we think there are
24 some, so we'll get into that more later. Next slide,
25 please.

1 This next slide just shows what a margin might
2 look like. These are made up numbers. During the
3 conversations about SB X1-2 one to last year and this or
4 the spring, there were lots of numbers thrown out. If you
5 were to impose a margin where might you put it? So these
6 again are just made up numbers for purposes of
7 illustration. Some folks that testified, they thought 50
8 cents would be a good margin above which a penalty ought to
9 be imposed. Others thought it should be much higher.
10 There was quite a robust discussion on it.

11 So this just takes a 60 cent per gallon, 80 cent
12 per gallon, and \$1 per gallon threshold. Again totally
13 hypothetical, but it gives you some sense of over how
14 frequently were you to set such a margin, the refiners
15 would likely be over. So if you look at the top one, the
16 green line at \$1, the there's only been six -- these are
17 monthly data and it goes back to 2015. Not long after a
18 dramatic fire that occurred at one of the refiners in
19 Southern California and the prices rose very high. That
20 was one point.

21 You have to fast forward all the way to 2022 when
22 you see another point. And then there are two more
23 embedded in those blue lines that go up above the
24 horizontal green line just last year. And you can see it's
25 creeping up again this year.

1 So there would have been six instances of going
2 over the margin if the margin were \$1 and it had been set,
3 you know, 10 years ago. And I won't go through all these,
4 but you can see as you go, as you move the number down,
5 there are more instances when there are exceedances by the
6 refining community. So these are things we're going to be
7 looking at very carefully as your staff over the next
8 months. And let me ask for the last slide, please.

9 We are going to host a workshop coming up next
10 month, towards the end of the month to hear input from
11 Californians about what they think about this. We also are
12 doing individual meetings with stakeholders from a variety
13 communities from industry, from environmental groups, from
14 EJ groups, from labor, from academia. And we're going to
15 continue to do those.

16 There's a mountain of data out there and a lot of
17 complicated questions, so we're going to spend some time
18 looking at that as well. And again, we'll come back to you
19 with some recommendations in the future. Thank you.

20 VICE CHAIR GUNDA: Thank you so much, Drew.
21 That's a really good setup.

22 So with that, let's move to public comment.

23 MS. BADIE: Thank you. This is Mona Badie, again
24 the Public Advisor at the California Energy Commission.
25 The Commission welcomes public comment on Item 9. We will

1 first take public comment from folks in the room. We've
2 asked folks to use the QR code that's posted or visit the
3 Public Advisor table at the back of the room to notify us
4 you'd like to make a comment. I'll also look for hands
5 after we've before we move to Zoom.

6 Still looking at our QR code queue we have Sarah
7 Taylor. Sarah, if you'd like to approach the podium,
8 please spell your name for the record before making your
9 comment, announce any affiliations you'd like to share.
10 We're asking for comments to be two minutes or less. Thank
11 you.

12 MS. TAYLOR: Thank you. Good afternoon Vice Chair
13 Commissioners. My name is Sarah Taylor, S-A-R-A-H T-A-Y-L-
14 O-R. I am Associate Counsel with the Western States
15 Petroleum Association. WSPA agrees that the central
16 purpose of SB X1-2 is for the CEC to get real world
17 information on the true reasons behind California's higher
18 prices before deciding whether a margin cap will help or
19 hurt Californians.

20 While the Legislature was considering SB X1-2
21 they heard from independent experts that pricing is driven
22 by market forces and a very isolated fuels market. And
23 that capping margins is likely to harm consumers and drive
24 retail prices up by aggravating California structural
25 supply issues. These economists spoke on the need for more

1 competition. That consumer pricing was a problem at the
2 retail level, not caused by refiners. And expressed
3 concern about shooting first and then finding out if it's
4 the right solution.

5 As Mr. Bohan noted in his presentation, though
6 it's also clear that the CEC shall not set a margin cap or
7 penalty unless it finds that the likely benefits to
8 consumers will outweigh the potential cost to consumers and
9 will "not lead to a greater imbalance between supply and
10 demand" nor "lead to higher average prices at the pump on
11 an annual basis." Yet this order is presented to you today
12 after just two months of data collection. While the order
13 immediately following simultaneously recognizes that
14 emergency regulations are needed to ensure clarity and
15 consistency, and data reporting for the very same data that
16 is supposedly informing this monumental penalty
17 determination.

18 It's also important to note that the CEC's data
19 posted to date, shows that state and federal policy
20 decisions have a nine times greater cost impact per gallon
21 of gasoline sold in California than the average net profit
22 for refiners.

23 We urge the CEC to do its due diligence,
24 including determining the multiple factors that have long
25 contributed to supply and pricing issues, and assessing

1 whether a cap would exacerbate problems for consumers, the
2 market, and California itself. As global energy and
3 national security concerns mount with two ongoing wars
4 affecting the crude oil market now is not the time for this
5 body to rush a decision that will likely impact every
6 Californian.

7 Thank you so much for your time.

8 MS. BADIE: Thank you.

9 Is there anyone else in the room who would like
10 make a comment? I'm not seeing any more hands in the room.
11 I'm going to transition to Zoom.

12 So if you're on Zoom, we ask you to use the raise
13 hand feature on your screen to notify us you'd like to make
14 a comment. You can also press *9 if you're on the phone
15 with us. And first up we have Jamie Court. Jamie, I'm
16 going to open your line. Please spell your name for the
17 record and announce any affiliations you'd like to share
18 before making your comment. We're asking for comments to
19 be two minutes or less.

20 MR. COURT: It's Jamie Court, J-A-M-I-E C-O-U-R-
21 T. And I'm the President of Consumer Watchdog. I
22 appreciate the time you've taken to get into this. I have
23 a couple of just comments and questions.

24 One is I've noticed the date. I just saw the
25 data that Drew presented and I noticed there was a

1 difference in the OPIS refining margins from the refining
2 margins produced under SB 1322. Under SB 1322, we've seen
3 in the last four months, the refining margins over \$1, the
4 gross refining margins. And that doesn't track with what I
5 just saw on Drew's slides. So I'd be curious to explore
6 that more put that up for comment more.

7 Also, I noticed that you had just posted the net
8 margins on the site. And the net margins are very
9 different than the gross refining margins, but there's no
10 explanation on the net margins of what costs are being
11 deducted by the refiners. And I'd ask that you all post
12 that information, because that was part of the information
13 provided to you by the refiners. What they're accounting
14 for in the net margin. I'd ask that you keep that as part
15 of the explanation of the net margins on the website to
16 make it clear what's being deducted from the gross margins
17 to get to the net margins.

18 Other than that, I would argue just in the
19 process of developing these rules -- and I'll have more to
20 say about this -- I think you need to also consider the gap
21 between US and California prices. Because that's when it
22 tracks when these margins really skyrocket when the gap
23 gets more than \$1.10, \$1.20. And I think that has to be
24 part of this equation and this analysis. And then
25 obviously looking at the margins, tracking with that over

1 \$1, over 80 cents, whatever it is.

2 But anyway, I look forward to working with you
3 all on this. And these are just some comments and
4 clarifications I hope you can make in the coming days, if
5 not today. Thanks.

6 MS. BADIE: Thank you.

7 That concludes public comment back to you, Vice
8 Chair.

9 VICE CHAIR GUNDA: Thank you, Mona.

10 Drew, would you like to comment?

11 MR. BOHAN: Yeah, I'd just briefly respond to the
12 two points the representative from the Western States
13 Petroleum Association mentioned: the profits. And Mr.
14 Court, I think mentioned that as well.

15 I would note that we did indeed publish some
16 profit information. But I'd like to point out for the
17 record that we published what the refiners sent to us. And
18 we're undergoing an inquiry now to evaluate those. So when
19 you look at the gross refining margin, again it's the sale
20 of the fuel minus the cost of crude and the environmental
21 costs. Then you're left with this margin, and it's
22 composed of two things: the costs to run the facilities.
23 So that includes labor, and repair, and electricity, and
24 everything else; and profits. What we haven't known until
25 recently is what's the difference? Of that component that

1 we've known for a long time, the gross refining margin,
2 what is profits and what its costs.

3 So industry was gracious enough to submit the
4 information that was requested of them. However, there are
5 numerous ways to calculate costs and profits. And so we
6 have a task on our hands, we've hired experts to help us
7 with it, to do our own due diligence. To look at those
8 numbers and see what we can learn, so we will be getting
9 back to folks. But what we've reported now is just
10 faithfully what we received from the industry.

11 To Mr. Court's point, I would just say I don't
12 know the differences between our numbers and OPIS's
13 offhand. But we do subtract Cap-and-Trade and LCFS costs
14 that could be responsible for it. But if you want to reach
15 out to me this afternoon, or later this week, I'd be happy
16 to chat about it. Thank you.

17 VICE CHAIR GUNDA: Thank you, Drew, for your
18 response.

19 And, Sarah, thank you for your comments. And Mr.
20 Court. Thank you, Jamie, for your comments as well.

21 So I want to just begin with some high-level
22 framing and comments. So I just want to begin by saying
23 thank you, Drew, for your incredible work trying to
24 shepherd this really monumental task of the entire Intel
25 (phonetic) bill, along with Aleecia Gutierrez, the Division

1 Chief for the Energy Assessments Division, and some of the
2 experts in her office, in her branch. And just
3 specifically noting Ryan Eggers and his team.

4 So I think the 30,000 foot level, just as a
5 reminder on SB X1-2 there are two fundamental elements to
6 the bill. So we're looking at improving transparency. And
7 then keeping everybody accountable. There are two
8 different pieces.

9 And for the transparency element, much of the
10 work on SB X1-2 is about gathering better information to be
11 able to, you know, shine a light on what the different
12 things are happening in terms of the costs we pay at the
13 pump. So I think that has been an enormous amount of work
14 to just get those data requests standardized and work with
15 the industry to move forward with gathering the data.

16 And I think we are now in a good place of
17 faithfully discharging that work of gathering the
18 information and begin to process that. So I think that's
19 one element of it.

20 So in terms of accountability, in the industry at
21 large, is basically two pieces. One is looking at what
22 this OIP is looking at, which is setting up potentially a
23 penalty if there is gross margins that are way out of line
24 where they might be subject to penalty. But now, as Drew
25 mentioned, that specific element is a very complicated

1 question. And then a lot of work has to be done to answer
2 that question.

3 There's also a second part of the panel or the
4 accountability, which is the independent division that was
5 stood up within the CEC, which is looking at market
6 manipulation or potentially market power and exertion of
7 other market forces in manipulating the potential price at
8 the pump. So I think we just want to make sure that we
9 clearly bifurcate the two buckets of work. You know,
10 improving transparency, which is bread and butter for CEC.
11 You know, we've done this for so many industries and we'll
12 continue to do that.

13 The second part, which is accountability, CEC has
14 one portion and the independent entity has another portion.
15 For the CEC's portion, which is the gross penalty margin
16 and the potential penalty -- and it's not that CEC hasn't
17 done penalty before, we do that across various sectors.
18 For this particular industry it's new for us. And it's
19 really important for us to do this really, really well,
20 taking into account that the final benefits and the cost to
21 the consumers as we consider that.

22 So I do want to respond to a couple of pieces. I
23 think to respond to WSPA's comments, I think one is just
24 the kind of back to back of setting up another proceeding
25 to gather more information. And I think it's noted that we

1 are kind of trying to get information, you know, very
2 quickly. And then this was a complicated analysis.

3 But I also want to note that whatever we do here
4 at the CEC will be done thoughtfully, and make sure that we
5 have all the information and the stakeholder input.

6 The second one I do want to respond to -- I
7 think, Sarah, you just put it in there -- which is the cost
8 of the state taxes and such are much higher, nine times
9 higher to kind of the refinery profits. And I think it's
10 important for us to note in good faith that those monies
11 that the state collects today are reinvested for the public
12 good, right. So I think we just want to -- it'll be good
13 for us to kind of have that fateful argument that those
14 monies are not going into shareholders' profits. That's
15 just coming back to the pockets of Californians in our
16 climate agenda. So but I duly note that that's another
17 cost in California.

18 So now as we think through the SB X1-2 there are
19 two elements that we have to contend. One is what is the
20 overall price at the pump? And the overall price at the
21 pump is going up over the years, and it could go up
22 furthermore, as we look at potential refinery retirements
23 in California, and potential shortage in California.

24 But on the other side is just the volatility of
25 the prices. And I think that has been the bigger pain

1 point for a lot of the consumers. One is the overall hike,
2 but the second is the volatility. And I think as we move
3 forward with the other work that the CEC has to do around
4 assessment and a transition plan, it really allows us to
5 think about this holistically. How do we improve
6 transparency? What is policy doing? And how can we impose
7 accountability in the most transparent, good faith way that
8 helps not just consumers of California, but the policy
9 paradigm of potentially the United States. Because, you
10 know, as we do things here it becomes a template for the
11 rest of the nation.

12 So with that, I know just commend again, the
13 staff for all the work. I do want to note a couple of
14 other people. Just the Chief Counsel, Linda Barrera and
15 her team. It has been an enormous amount of work for them
16 to kind of keep moving this conversation and in advising my
17 office audio for her work to continue to support this.

18 So with that, I'll as are there any other
19 comments? Okay, to you.

20 COMMISSIONER GALLARDO: Thank you, Vice Chair
21 Gunda. Also, props to you for all the hard work you're
22 doing on this effort.

23 I was just wanted some clarity, in terms of the
24 proceeding will that also address the penalty? Will that
25 take into consideration if there's a penalty, what that

1 would look like, where it would go etc. Okay, I'm seeing
2 Andrew nodding, yes and you too. Okay. Thank you. That
3 was it.

4 VICE CHAIR GUNDA: Thank you, Commissioner.

5 Commissioner McAllister, do you have anything?

6 COMMISSIONER MCALLISTER You know, I just wanted
7 to thank you for your leadership on this. It's been very
8 involved and kind of really, I think having a sort of a
9 constant vision for how this needs to go. And giving solid
10 direction to the staff. And then sort of helping with
11 together with Drew helping to stand up a new division and
12 sort of give that some life. I just wanted to give you
13 props for your leadership on this effort and thanks.

14 Thanks to you and to Drew and the whole staff.

15 VICE CHAIR GUNDA: Thank you, Commissioner
16 McAllister.

17 With that I would like to move to a vote.
18 Commissioner Gallardo?

19 COMMISSIONER GALLARDO: I move to approve Item
20 Number 9.

21 VICE CHAIR GUNDA: Commissioner Monahan?

22 COMMISSIONER MONAHAN: I second.

23 VICE CHAIR GUNDA: We'll go with the vote now.
24 Commissioner Gallardo?

25 COMMISSIONER GALLARDO: Aye.

1 VICE CHAIR GUNDA: Commissioner Monahan.

2 COMMISSIONER MONAHAN: Ayes.

3 VICE CHAIR GUNDA: Commissioner McAllister?

4 COMMISSIONER MCALLISTER: Aye.

5 VICE CHAIR GUNDA: And I vote aye as well. The
6 vote count is 4-0 and passes. Thank you.

7 Moving on to Item Number 10.

8 MS. GUITERREZ: Good afternoon, oops. Can you
9 hear me? Good afternoon, Commissioners. I'm Aleecia
10 Gutierrez, Director of the Energy Assessments Division and
11 today I'm presenting the Order Instituting Rulemaking For
12 SB X1-2 for your consideration and approval. Next slide,
13 please.

14 As Drew said in the previous presentation in
15 March 2023, Governor Gavin Newsom signed a senate bill, SB
16 X1-2, to protect Californians from experiencing price
17 gouging at the pump by oil companies. The new law benefits
18 Californians by protecting consumers from price gouging and
19 increasing transparency in the petroleum industry.

20 SB X1-2 increased the CEC's data collection
21 authority, and the CEC is charged with using the additional
22 data to report to the public monthly on the gross gasoline
23 refining margin. And develop a transportation fuels
24 assessment that includes options to avoid future price
25 spikes.

1 The CEC is also charged with determining a
2 maximum gross gasoline refining margin and whether a
3 penalty should be assessed for refiners that exceed it.

4 The statute also calls for the new independent
5 petroleum Division of Petroleum Market Oversight, which is
6 charged with monitoring the petroleum market. And
7 identifying and reporting potential market manipulation
8 activities for further investigation. Next slide.

9 The new data collection authority includes data
10 on refinery costs that help us determine the portion of the
11 refiner margin that is counted as profit. Petroleum
12 markets including spot market transaction data, which helps
13 inform whether there is market manipulation. Refiner
14 maintenance, which provides insights on outages and their
15 impacts on gasoline supplies for California; and other data
16 elements. Next slide.

17 One of the key areas of focus of the proposed OIR
18 is refinery maintenance turnarounds. SB X1-2 authorizes
19 the CEC to consider ways to manage necessary refinery
20 turnarounds to avoid acute shortages. Through the OIR
21 staff will explore considerations to maintenance deferrals
22 on safety, emissions, and more. And propose regulations to
23 define the process by which the CEC would manage
24 maintenance turnarounds. Next slide.

25 The proposed OIR before you today is broad in

1 scope allowing CEC to propose and receive input on the code
2 sections established by SB X1-2. As mentioned on the
3 previous slide, staff envisions that the focus of the
4 rulemaking proceeding will be on refinery maintenance
5 turnarounds and the process to manage turnarounds.

6 The rulemaking will also consider rules and
7 guidelines for data collection, and whether there is a need
8 for standardization or clarification of terminology or
9 calculations. Currently, we are reporting monthly refining
10 margin data as reported to CEC by refiners. The rulemaking
11 will support standardization of cost inputs and other
12 components, so we have consistency in the data we are
13 analyzing to inform decisions around the refining margin
14 and penalty.

15 Finally, the rulemaking proceeding is flexible in
16 scope allowing for regulations to be developed to cover
17 other aspects of Public Resources Code impacted by SB X1-2,
18 SB 1322, and other PIRO provisions as warranted. Last
19 slide.

20 The this is a simplified list of steps in the
21 regulatory process and doesn't get into the details. But
22 staff is planning to host a workshop on November 3rd to kick
23 off the rulemaking process, present initial concepts, and
24 begin developing a record of stakeholder input. We
25 anticipate we will receive input at this workshop that will

1 inform whether we want to recommend separate tracks with
2 different timing and process steps for the different
3 aspects of SB X1-2. With input received from this workshop
4 staff will develop and walk through draft regulations and
5 another OIR workshop or hearing. After applicable
6 rulemaking processes staff would present proposed
7 regulations to the Commission for approval at a business
8 meeting.

9 Staff recommends that you approve the order
10 instituting rulemaking for SB X1-2. This concludes my
11 presentation and I am here with Chief Counsel's Office to
12 respond to your questions.

13 VICE CHAIR GUNDA: Thank you, Aleecia. We will
14 now hear public comment.

15 MS. BADIE: Thank you. This is Mona Badie, the
16 Public Advisor for the California Energy Commission. The
17 Energy Commission welcomes public comment on Item 10.
18 Thank you. And first, we'll go to folks in the room and
19 then we'll go to Zoom. So if you're in the room, we've
20 asked you to use the QR code. I'll also look for show of
21 hands before I move to the Zoom portion.

22 So in the room we have Sarah Taylor. Sarah, if
23 you can approach the podium. And again please spell your
24 name for the record just one more time, announce any
25 affiliations, and we're asking for comments to be two

1 minutes or less.

2 MS. TAYLOR: Thank you so much. And good
3 afternoon again, Vice Chair and Commissioners. My name is
4 Sarah Taylor, S-A-R-A-H T-A-Y-L-O-R. I am Associate
5 Counsel with the Western States Petroleum Association.

6 The CEC should provide any draft rule language
7 and guidance well in advance of the November 3rd workshop,
8 so we can have a meaningful discussion with staff and to
9 provide a reasonable amount of time to contribute helpful
10 input. We cannot shortchange this process. A structured
11 rulemaking would likely have prevented the inconsistencies
12 the CEC has found to date in the data already submitted.

13 While SB X1-2 could exempt a rulemaking specific
14 to plan maintenance and turnarounds from the Administrative
15 Procedure Act we believe that this is ill advised. And
16 would deny the public an adequate opportunity to provide
17 input and hear why facility maintenance is critically
18 important to maintaining these infrastructure assets to
19 reliable market supply, to prevent safety risks for
20 employees and surrounding communities. And to avoid
21 unplanned shutdowns and the negative environmental
22 consequences that can flow from them.

23 Rulemaking is also necessary for the SB X1-2
24 reporting requirements for which no APA exemption is
25 provided by statute. Thus, any fulsome rulemaking outside

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1 of the APA would be unauthorized and a partial rulemaking
2 specific to maintenance and turnaround would be inadequate
3 in scope. Otherwise, we believe the CEC will find itself
4 lacking uniform compliance, possessing inconsistent data,
5 and struggling with data management and analysis.

6 Data has the potential to move markets, place our
7 in-state refineries at a competitive disadvantage, and
8 could have a monumental impact on our economy at a time of
9 increasing global volatility. Expediting this process does
10 not help any of us. It does not provide industry with the
11 clarity needed to provide uniform data to the CDC. And it
12 would not lead to well-informed decision making, because
13 the data would likely provide a distorted view of how the
14 industry operates, potentially worsening a situation the
15 CEC is tasked with avoiding.

16 I thank you again for your time and appreciate
17 the opportunity to comment.

18 MS. BADIE: Thank you for your comment.

19 We're now going to send a look for any hands in
20 the room. And I'm going to transition to Zoom now. So if
21 you're on Zoom, and you'd like to make a comment, please
22 use the raise hand feature to let us know. And if you're
23 joining by phone, press *9. And we have no raised hands on
24 Zoom. Back to you, Vice Chair.

25 VICE CHAIR GUNDA: Okay. Thank you so much,

1 Mona.

2 So Drew or Aleecia, I just want to talk a little
3 bit about this particular one in terms of the timing on
4 this. And I think I do want to appreciate the comments
5 that were just made by WSPA, Sarah. I'm just kind of
6 making sure that we have the time to discuss with the
7 industry on what we're asking for. But also there is
8 clarity on all sides. Could you please comment on that?

9 MR. BOHAN: Sure. I think we -- since there have
10 been a few months that have passed since the legislation
11 became effective, we've learned a lot. And you'll recall
12 we've resisted efforts in the past to start a rulemaking
13 proceeding, because we wanted to learn from the information
14 we got. We've learned. So now we're coming back to you
15 saying now we'd like to take a look at this and we can
16 build on what we've learned.

17 The comment from the representative from WSPA is
18 well taken. This is going to be complicated. We do need
19 to learn from their members as well as other folks in the
20 public, so we appreciate that.

21 VICE CHAIR GUNDA: Drew, I just want you to
22 expand on that a little bit on kind of what is the process
23 you're envisioning, right. So this is going to be I mean a
24 typical rulemaking in a lot of ways. But also it'll have
25 some sort of an accelerated timeline in some ways. So if

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1 you could just expand on the process on how we're making
2 sure we're checking off all the marks that'd be great.

3 MR. BOHAN: Sure. Well, as Aleecia noted in her
4 presentation, one of the main things we're going to look at
5 is the turnarounds. And to what extent the authority
6 granted us to have an impact on the timing of those
7 turnarounds should be implemented. I think all the issues
8 that were raised about safety and security of both the
9 communities in which these facilities are located, and the
10 workers who make their living there, is critical. We've
11 got to get this right.

12 So I wouldn't want to put it very specific
13 timeframe on it, but to the extent the comments you heard
14 contemplate a very, very quick turnaround I don't think
15 it's going to be that quick. So that's on the maintenance
16 issue.

17 Then the other issue, some of the data we've been
18 getting similarly, we've gotten -- I think it's a fair
19 point that some of the data has been anomalous. And so we
20 want to take a look at that and figure it out. We're
21 trying to move as quickly as we possibly can, but we
22 appreciate it's a task that's far better done right than
23 done quickly and not quite right. So we're going to take
24 as long as we think it takes to do it properly. But we're
25 putting a lot of resources into it.

1 VICE CHAIR GUNDA: And I think the last question
2 is like then tying it back to the previous comment that
3 Sarah made on the previous item. In terms of the timing on
4 making sure we feel strongly that we have the right data
5 before moving into the penalty, could you just kind of talk
6 about that handoff?

7 MR. BOHAN: Sure. We plan to be very transparent
8 throughout this process. We don't feel bad at all saying
9 to you today, we aren't there yet. But we're going to be
10 transparent all through this process where what we're
11 thinking. To the extent we feel we're getting close in one
12 or more areas, we're going to do what we typically do in
13 this organization, which is to go out. And again, hear
14 from folks, publish drafts, get reactions, and try to
15 develop the best package we can.

16 VICE CHAIR GUNDA: Okay, thank you. I just have
17 a couple of comments and, and I'll pass it to other
18 Commissioners.

19 So I think I do want to just appreciate, you
20 know, the industry for working really well with the
21 Commission in helping us collect the initial data. So I
22 just wanted to give credit where it's due in terms of just
23 your openness in working with the Commission staff on
24 ensuring that we have the data coming in. And thank you
25 for continuously raising the issue about consistency. We

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1 needed to really understand the data first to be able to
2 kind of even understand what you're asking for. So I think
3 we have now a couple of months of data and 10 years of data
4 also came in. So we feel much better equipped in being
5 able to have a more educated conversation on exactly what
6 we're all talking about from different sides. So that's I
7 think one element. So I appreciate the industry's
8 collaboration and welcome that on an ongoing basis.

9 Also, which I know you have been taking enormous
10 amount of diligence in making sure all parties are included
11 in a whether it's consumer advocates, environmental
12 justice, environmental groups. I think this is an
13 important data in having a very robust process and making
14 sure everybody understands the data. And even if it means
15 having, you know, staff level workshops or informational
16 items I think it will just benefit all of us as we continue
17 this process.

18 And also I just wanted to take this opportunity
19 to revisit the previous item too. As you noted, given that
20 we are going to use this data in coming up with the
21 penalty, potential penalty framework, I think it's really
22 important. And I would urge you to lean on the consultants
23 we have today to put out different ways of framing the
24 penalty.

25 So I think having a few options to look at how

1 the penalty must be articulated would be really helpful.
2 And even from the independent division given that, you
3 know, Director Milder is here, and he's thinking about
4 these things too. It would be really helpful to see and
5 ask if Director Milder and the Division has a framework
6 that they would like to suggest. So we can have the
7 discussion in the public process, and just kind of go
8 through that. Sorry, that's kind of how hard this problem
9 is.

10 But anyway so I think I just want to make sure
11 that we have a thorough thinking on this before we move
12 into issues with that.

13 With that any other Commissioners?

14 COMMISSIONER GALLARDO: I have one question and
15 this might be for Aleecia or maybe for Chief Counsel's
16 Office. I was just curious if you could say whether it's
17 typical or unusual to have guidelines exempt from the APA
18 that was mentioned earlier, the Administrative Procedures
19 Act? And it's still consideration, but just if you could
20 explain that.

21 MS. BARRERA: I'm just testing. Can I be heard?

22 MR. OLIVER: (Overlapping colloquy._

23 MS. BARRERA: Yes.

24 MR. OLIVER: Oh, go ahead.

25 MS. BARRERA: Go ahead.

1 MR. OLIVER: Chad Oliver from the Chief Counsel's
2 Office. APA exempt guidelines are typically specified in
3 statute. And in this particular case there are only
4 limited -- it's only a limited provision that is -- maybe a
5 couple of limited provisions that are exempt from the APA
6 process.

7 One of those is refinery maintenance reporting.
8 But the rules governing refinery maintenance timing and
9 turnarounds are not APA exempt. But again, those are
10 specified in the statute.

11 COMMISSIONER GALLARDO: Excellent. Thank you.

12 VICE CHAIR GUNDA: I just want to check if
13 Commissioner McAllister has any comment?

14 COMMISSIONER MCALLISTER No, I just appreciate
15 the presentation. And just want to acknowledge Aleecia's
16 leadership on this too. I know that she's been shouldering
17 a lot of this burden, as well together with Drew, so great
18 teamwork.

19 And I think, you know, we had a previous item
20 that also was a guidelines process. And I think that the
21 Legislature doesn't do that lightly. They kind of prefer
22 us to do rulemakings. But when there's a need to have sort
23 of a little more flexibility and a little more back and
24 forth and make adjustments, it really helps. And so I
25 think that process is going to fit this. The guidelines

1 sort of flexibility is going to fit this process and allow
2 us to be responsive to some of the comments we've heard.

3 So anyway I appreciate your leadership, Vice
4 Chair, and as well as Drew and Aleecia.

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

7 Before we go to vote I just want to conclude I
8 thank Aleecia, to you Drew, and Chief Counsel and their
9 entire team. Again, tremendous work on moving this
10 forward. And this is an incredible amount of
11 responsibility that was given to our agency. I think this
12 is, to me I don't -- I can't think of another item that
13 that requires our principles to be stood up even more. Our
14 principles of transparency and objectivity. You know, the
15 principles that form the basis of our organization. And
16 commend you for doing that today, and then continue to
17 foster those elements as we continue this work.

18 So with that, I would like to take the vote.
19 Does somebody want to move?

20 COMMISSIONER MONAHAN: I move this item.

21 COMMISSIONER GALLARDO: I second.

22 VICE CHAIR GUNDA: Commissioner Monahan.

23 COMMISSIONER MONAHAN: Aye.

24 VICE CHAIR GUNDA: Commissioner Gallardo.

25 COMMISSIONER GALLARDO: Aye.

1 VICE CHAIR GUNDA: Commissioner McAllister.

2 COMMISSIONER MCALLISTER: Aye.

3 VICE CHAIR GUNDA: And I vote aye as well. The
4 vote count is 4-0 and the motion passes.

5 Let's move to Item 11.

6 MR. SPIVEY: Good afternoon, Vice Chair and
7 Commissioners. I am Hudson Spivey, the Supervisor of the
8 Distributed Electricity Backup Assets or DEBA Program. I'm
9 joined today by Ashley Emery Branch Manager of the DEBA
10 Program; Deana Carrillo, Director of the RREDI Division;
11 and Lisa DeCarlo, from the Chief Counsel's Office to help
12 respond to any questions.

13 Today I have the distinct pleasure of presenting
14 to you the proposed guidelines for the new DEBA Program for
15 your consideration for approval. Next slide, please.

16 The effects of climate change including extreme
17 heat, drought, and wildfires, coupled with supply chain
18 delays, have challenged the state's ability to plan for and
19 maintain grid reliability. So as part of last year's
20 budget through the passage of AB 205, the Legislature and
21 Governor created a Strategic Reliability Reserve to help
22 meet our emergency grid needs outside of our normal
23 planning standards. The Strategic Reliability Reserve
24 provides for the creation and funding have multiple
25 programs designed to address electric grid reliability over

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1 the next several years, including the DEBA Program and the
2 Demand Side Grid Support or DSGS Program. The DEBA and
3 DSGS programs serve as complementary programs to help meet
4 grid needs during extreme events.

5 DEBA incentivizes the purchase of new, cleaner,
6 and more efficient distributed energy assets that will
7 serve as on-call emergency supply or load reduction during
8 extreme events. Whereas DSGS incentivizes the use of
9 existing load reduction resources during extreme events.
10 Next slide, please.

11 As part of the Strategic Reliability Reserve, the
12 DEBA Program serves as one of the state's tools in
13 responding to unplanned extreme events taxing California's
14 electrical grid. As established by AB 205 the program
15 seeks to achieve the following goals: support grid
16 reliability by enhancing load capacity during extreme
17 events. Grow the fleet of clean resources supporting the
18 grid. And diversify the types of resources that are
19 available in times of need.

20 These goals benefit Californians by supporting
21 reliability of our electrical grid, providing electricity
22 to all Californians, including our most vulnerable. Next
23 slide, please.

24 Statute requires the CEC to develop guidelines in
25 consultation with the California Air Resources Board. The

1 guidelines must consider the useful life of equipment
2 receiving incentive funds in relation to the state's
3 climate and air quality requirements. The guidelines must
4 also include a loading order that aims to achieve
5 electricity reliability and prioritizes feasible, cost
6 effective, demand response and efficiency resources. Then
7 feasible, cost effective renewable, and zero emission
8 resources. And then feasible cost effective conventional
9 resources.

10 Statute also requires that all funding recipients
11 participate as an on-call emergency resource during extreme
12 events. And power generators must comply with the state's
13 mandatory GHG greenhouse gas emissions reporting
14 requirements. Next slide, please.

15 We anticipate a phased launch for the DEBA
16 Program to help resources come online as quickly as
17 possible. This first phase includes our guidelines with
18 basic program parameters, followed by the release of
19 program funding through grant funding opportunities.

20 In the second phase we will evaluate lessons
21 learned to consider revisions to these guidelines including
22 an incentive-based approach for certain clean technologies.
23 And potentially issue additional grant funding
24 opportunities as appropriate.

25 In the third phase, we will continue to evaluate

1 program effectiveness and address lessons learned. Next
2 slide, please.

3 The proposed guidelines include two project
4 funding categories consistent with the two categories set
5 out in the program's authorizing statute. I will provide
6 more details on these two categories later in the
7 presentation. The first is bulk grid assets, and the
8 second is distributed resources.

9 We plan to initially award program funding to
10 grant funding opportunities or GFOs. But the guidelines
11 leave open the possibility of issuing funds to other
12 mechanisms in the future, such as an incentive-based
13 approach. The program guidelines will serve as a broad
14 program framework, but the GFOs will include specific
15 parameters such as which projects are targeted. And the
16 technical scoring criteria.

17 These parameters will be tailored based on
18 program funding targets and the state's evolving grid
19 reliability needs. As mentioned previously, statute
20 requires DEBA funding recipients to participate as on-call
21 emergency resources during extreme events. The
22 requirements for participation will depend on the project
23 selected and will also be tailored to each GFO
24 solicitation. Next slide, please.

25 As mentioned previously, statute established two

1 categories of eligible projects: bulk grid assets and
2 distributed resources. Bulk grid asset projects are
3 efficiency upgrades, maintenance, and capacity additions to
4 existing power generators. These projects must increase
5 the power output of an existing power generator that is
6 interconnected to the bulk transmission grid. Distributed
7 resources are new zero or low-emission technologies at
8 existing or new facilities with the first point of
9 interconnection that is not on the bulk transmission grid.
10 And these can be front-of-the-meter or behind-the-meter.

11 These two funding categories are intended to
12 provide optimum reliability benefit to the state by both
13 one, maximizing the efficient use of existing generation
14 resources on the bulk transmission grid. And two, building
15 out a fleet of new distributed resources. The proposed
16 guidelines provide examples of the types of projects that
17 may be eligible under each category. However, this list is
18 not intended to be exhaustive, as staff do not wish to
19 prevent participation from any emerging technologies that
20 may be able to support the grid in the future.

21 Ineligible projects include all diesel backup
22 generators, as well as standalone variable resources
23 without paired storage. Next slide, please.

24 The DEBA Program is currently funded with \$545
25 million. The guidelines set an anticipated funding

1 allocation of up to \$100 million for bulk grid assets and
2 up to \$445 million for distributed resources. We are
3 targeting that at least 25 percent of funding will be
4 dedicated to projects in publicly owned utility
5 territories, as these are responsible for approximately 25
6 percent of power consumers in the state. We are also
7 targeting at least 50 percent of distributed resources
8 funding will be dedicated to projects located in or
9 benefiting disadvantaged communities. Next slide, please.

10 The proposed guidelines include example technical
11 scoring criteria that may be used to evaluate GFL
12 applications. The technical scoring criteria will be
13 tailored with each GFO, based on program funding targets
14 and the states grid reliability needs. For bulk grid
15 assets the criteria include whether the Applicant and
16 project have met all eligibility requirements specified in
17 the solicitation manual. How the project's anticipated
18 useful life relates to the state's climate and air quality
19 requirements. Capacity and availability, including the
20 total amount of power the project would provide during peak
21 demand hours of 4:00 to 10:00 p.m. Along with a
22 measurement and verification plan that describes how
23 performance during an emergency event will be metered,
24 documented, and verified. The cost effectiveness of the
25 project including the dollar amount of DEBA funding per

1 megawatt of additional power. And lastly, project
2 readiness and how quickly the project can come online.

3 For distributed resources the example criteria
4 include the loading order set forth by AB 205. And like
5 bulk grid assets, applications may be evaluated based on
6 eligibility, resource longevity, capacity and availability,
7 cost effectiveness, including if the project leverages
8 federal funding, and project readiness.

9 Additionally, distributed resource projects may
10 be evaluated based on whether they are located in or
11 benefiting disadvantaged communities. And whether they are
12 replacing or displacing fossil fuel generation. Projects
13 may also be evaluated based on any co-benefits and the
14 extent to which the project enhances the diversity of the
15 projects supporting the Strategic Reliability Reserve.
16 Next slide, please.

17 Over the past year, we have been working closely
18 with a wide array of stakeholders to develop the DEBA
19 Program framework and guidelines. In November last year,
20 we released a request for information to get preliminary
21 feedback on a potential program design. And we also
22 organized and facilitated a public workshop in January to
23 get additional feedback. Based on that initial input and
24 ongoing stakeholder engagement, staff prepared draft
25 guidelines that were released for public comment and

1 discussed at a public workshop held in this past August.

2 Based on more than 30 public comments from
3 stakeholders, staff prepared the final proposed guidelines,
4 which were posted on October 6th ahead of today's business
5 meeting. If the guidelines are approved today, we
6 anticipate releasing the first bulk grid asset GFO before
7 the end of the year. We also plan to release a draft of
8 the first distributed resources GFO for public feedback
9 before the end of the year, with the goal of having the
10 final version out and the first quarter of 2024. Next
11 slide, please.

12 As I stated, we received more than 30 comments on
13 our draft guidelines in our docket. And this table shows
14 some examples of the more prominent comments we received.
15 Several stakeholders asks that more details be included in
16 the guidelines such as incentive amounts and performance
17 requirements. Staff proposed that the specific details be
18 included in the upcoming solicitations to account for the
19 nuanced requirements needed for many types of projects that
20 may be eligible for DEBA funding.

21 We also received feedback request requesting
22 clarification on the difference between bulk grid assets
23 and distributed resources, which we have provided in our
24 revision of the proposed guidelines. Some stakeholders
25 have also advocated for an incentive-based program for

1 clean technologies like behind-the-meter battery storage
2 similar to the Public Utility Commission's Self-Generation
3 Incentive Program. The proposed guidelines specify that
4 DEBA funding may be dispersed through other mechanisms
5 after this initial phase. At this time, Staff recommends
6 focusing resources on the initial GFOs and we will consider
7 a programmatic option and subsequent guideline development.

8 We also received advocacy to direct all funding
9 toward clean technologies benefiting disadvantaged
10 communities. In response, the proposed guidelines
11 increased the funding target for disadvantaged communities
12 from 25 percent to 50 percent. However, Staff recommends
13 not restrict restricting eligibility to provide the
14 flexibility needed to address grid constraints. Next
15 slide, please.

16 This truly has been a team effort. I would like
17 to thank staff from STEP and EAD as well as the Chief
18 Counsel's Office and the Advisors from Vice Chair Gunda's
19 Office for their contributions and guidance to this
20 process.

21 I would also like to thank and recognize all the
22 stakeholders who have participated in this process.

23 Staff recommends that the Energy Commission adopt
24 staff's determination that these guidelines are exempt from
25 CEQA and approve the first edition of the Distributed

1 Electricity Backup Assets Program Guidelines. This
2 concludes my presentation and I'm available to answer any
3 questions you may have. Thank you.

4 VICE CHAIR GUNDA: Thank you, Hudson.

5 Let us move to public comment.

6 MS. BADIE: Thank you. This is Mona Badie, the
7 Public Advisor at the California Energy Commission. We
8 will now take public comment on Item 11. And first I'll go
9 to folks in the room and then we'll transition to Zoom. So
10 if you're in the room we've asked you use the QR code, and
11 also look for a show of hands before we transition to Zoom.

12 And first we have Scott Lipton. Scott, if you
13 can approach the podium, please? Please spell your name
14 for the record, announce any affiliations you'd like to
15 share. And we're asking for comments to be two minutes or
16 less.

17 MR. LIPTON: Commissioners, thank you. Scott
18 Lipton, S-C-O-T-T L-I-P-T-O-N, the Western Policy Energy
19 Manager for Enchanted Rock, a micro grid developer with a
20 national footprint.

21 I first want to direct my comment to the
22 Commissioners for engaging in this effort. We thank you.
23 This is a tremendous opportunity to drive microgrid
24 development and distributed energy development throughout
25 California. Things that are absolutely necessary for

1 California to appropriately meet its energy demands over
2 not just the next 15 years, as the Vice Chair has pointed
3 out in numerous occasions, but really over the next 5 years
4 when our demand will be greatest. And our supplies will be
5 constrained as we move forward to the energy transition.

6 I do also want to thank staff for all of their
7 hard work and efforts on this project and on these efforts.
8 Specifically, Deana Carrillo and Hudson Spivey as well as
9 their team, greatly appreciate they've had an open door
10 policy for those of us stakeholders on this process. And
11 we appreciate it very much.

12 We do have a broad statement of support for the
13 overall goals and objectives of the DEBA Program, something
14 that we think is admirable for the state and we look
15 forward to it being successful. We do want to also
16 register our support for the program's focus on maximizing
17 the dollars per megawatt, as well as the speed to grid for
18 those megawatts. This is a program that has the maximum
19 opportunity to deliver the greatest bang for the buck, as
20 we say, if the CEC does focus again on those technologies
21 and those grid resources that can maximize both private
22 funding, as well as CEC funding for maximum megawatts.

23 We do also want to say, and some may have heard
24 today, that CEC is evaluating drafts of the GFOs for
25 stakeholder input later this year. It's something we're

1 very buoyed by and very much appreciate.

2 I do though want to raise a concern and something
3 for further consideration. And that is for the ability for
4 project developers to stack or utilize multiple existing
5 funding streams for DEBA to obtain DEBA dollars. This may
6 include General Fund dollars, like the DEBA Program, but
7 also CPUC program dollars, and other programs maybe not yet
8 envisioned.

9 Thank you very much. We look forward to the
10 continued process.

11 MS. BADIE: Thank you.

12 Next we have Frank Harris. Frank, if you can
13 approach the podium, please. Please spell your name for
14 the record, announce any affiliations you'd like to share.
15 We're asking for comments to be two minutes or less.

16 MR. HARRIS: Very good. Thank you. Frank
17 Harris, F-R-A-N-K H-A-R-R-I-S. I'm with the California
18 Municipal Utilities Association. Vice Chair Gunda,
19 Commissioners and staff, I really appreciate the
20 opportunity to speak today in support of the Distributed
21 Electricity Backup Assets Program.

22 CMUA's membership, as was mentioned by Mr.
23 Spivey, provides proximately 25 percent of California's
24 electric load and as such CMUA supports the 25 percent
25 earmark that has been established in the guidelines. Many

1 CMUA members serve areas that include substantial low-
2 income and disadvantaged communities. And as such, we
3 appreciate the Energy Commission's commitment to steer a
4 share of the DEBA funds towards projects that are located
5 in these low-income or disadvantaged community areas.

6 We also appreciate the opportunity to collaborate
7 with staff. As Mr. Lipton said, Mr. Spivey and his office
8 has had a truly open door policy throughout this process.
9 We believe that the DEBA Program can serve as an important
10 source of support and that this source can be instrumental
11 in moving projects forward. It was with this interest that
12 I believe that the Energy Commission staff has had such an
13 open process while they've developed these guidelines.

14 We particularly appreciate the Energy Commission
15 staff efforts to revise the approach to support greater
16 certainty for grant awards. Greater certainty about the
17 share of the project support being provided by DEBA as well
18 as when that support would be distributed, can help
19 moderate residual project financing costs and therefore
20 reduce the cost for California ratepayers.

21 Now, resource adequacy is a key driver in POU
22 planning and to that end CMUA also appreciates the work by
23 the Energy Commission staff in balancing the important
24 roles of California Strategic Reliability Reserve, and RA
25 requirements. We look forward to reviewing the initial GFO

1 when published and will continue to work with our member
2 POU's as well as Energy Commission staff to make the DEBA
3 Program a success. Thank you again.

4 MS. BADIE: Thank you.

5 Next we have Meredith Alexander. Meredith,
6 please approach the podium. We'd ask that you'd spell your
7 name for the record, announce any affiliation. And we're
8 asking for comments to be two minutes or less.

9 MS. ALEXANDER: Thank you. Good afternoon,
10 Commissioners Meredith Alexander, M-E-R-E-D-I-T-H Alexander
11 and I'm here on behalf of Generac Power Systems. Thank you
12 very much for the opportunity to comment today on the DEBA
13 Program and for all the work done by your staff on program
14 development to date. Generac appreciates your staff's
15 dedication and finalizing the guidelines as enabled by AB
16 205. And we understand that the guidelines will allow
17 immediate grid investments for the bulk assets opportunity.

18 Generac is very eager to pursue customer sited
19 residential, commercial, and industrial projects under this
20 allocation that will support reliability in California. So
21 we know that distributing the 445 million in funds that
22 have been designated for distributed resources will
23 probably require further program design. But we wish to
24 emphasize that industry, citizens, the grid, are really
25 anticipating this investment in these customer sited

1 resources.

2 We know that aggregated DERs have provided value
3 to the grid with load shifting and demand response on a
4 large scale around the US. The DOE recently published
5 their liftoff report on virtual power plants. And while
6 programs like DSGS will help to incentivize VPPs we really
7 think the upfront incentives from DEBA are critical to
8 motivate installations of these reliable cost effective
9 resources that can support local and broader grid
10 resiliency.

11 So Generac with supportive other stakeholders
12 that you'll hopefully hear from today, submitted some ideas
13 in the docket for a "program of activities" to allow the
14 Commission to use the GFO structure, but support smaller
15 scale aggregations that can be distributed across the
16 state. So we'd encourage today, you to consider design
17 ideas that will enable DERs owned by everyday Californians
18 and businesses.

19 Given that time is of the essence, we strongly
20 recommend that a great way to design an effective first
21 draft GFO would be to hold a stakeholder working group to
22 walk through the recommendations already submitted into
23 this docket. And we hope that that can be done instead of
24 potentially waiting for another round of guidelines. So we
25 hope that could occur in coming weeks, so that we can try

1 to deploy resources next summer. We look forward to
2 continued engagement with you and your staff. Thanks for
3 your time.

4 MS. BADIE: Thank you.

5 I'm not seeing any other commenters in the room,
6 so I'm going to transition to Zoom. If you're joining us
7 by Zoom and you'd like to make a comment, please use the
8 raise hand feature. If you're joining by phone, please
9 press *9 to notify us you'd like to make a comment.

10 First we have Brad Heavner. Brad, I'm going to
11 open your line. Please spell your name for the record,
12 announce any affiliation. And please limit your comments
13 to two minutes or less.

14 MR. HEAVNER: Good afternoon, Vice Chair and
15 Commissioners, this is Brad Heavener, B-R-A-D H-E-A-V-N-E-
16 R. I'm Policy Director with the California Solar and
17 Storage Association. We'd like to thank and applaud the
18 staff for bringing this -- getting the guidelines to this
19 stage and bringing them forward today. And we strongly
20 encourage you to adopt these guidelines.

21 CALSSA's interest is in behind-the-meter energy
22 storage. We think that there's enormous potential to help
23 with grid challenges and build a lot more resources that
24 are specifically targeted towards those challenges.

25 We have strongly encouraged creation of an open

1 enrollment incentive program as part of DEBA. Hudson noted
2 this in his review of the comments. And I think that there
3 were numerous parties who made this recommendation to do a
4 program rather than just GFOs. And we're concerned that
5 there won't be the opportunity to do that quickly enough in
6 order to get a lot of resources online for 2024.
7 Distributed resources can be built very quickly, in many
8 cases much more quickly than the large scale resources, but
9 obviously not overnight. And can be done so much more
10 efficiently in response to an open enrollment program than
11 a GFO just given the realities of project development.

12 So we're concerned if there is this three-stage
13 process, and the program comes third, and there's a draft
14 of a distributed GFO that happens before the final GFO for
15 distributed resources, that we won't be done in time. So
16 we strongly would like to work with staff as they develop
17 the draft GFO for distributed resources, just to make sure
18 that we are able to share our insights into what will
19 really work in the marketplace and what won't. And avoid a
20 lengthy rewrite of that draft GFO.

21 So we again applaud you. We want to help ensure
22 that this funding remains in place. To do that strongly,
23 we really need to have some confidence that distributed
24 resources are a big part of this in a viable way. And we
25 really look forward to working with the depot program and

1 with the Commission to make this a great success. Thanks
2 very much.

3 MS. BADIE: Thank you.

4 Next we have Jon Hart. Jon, I'm going to open
5 your line. Please spell your name for the record. We're
6 asking for comments to be two minutes or less. Okay. I
7 think, Jon, if you lowered your hand by accident, please
8 raise your hand again. All right, Jon. I'm going to open
9 your line.

10 MR. HART: Thank you, Commissioners. Thank you
11 for the opportunity to speak. My name is Jon Hart, J-O-N
12 H-A-R-T. I'm with PowerFlex. We're a behind-the-meter
13 solar storage and electric vehicle charging provider.

14 I want to echo many of the comments.
15 Specifically really appreciate the Energy Commission staff.
16 Hudson and his team for their work going into this, their
17 availability to speak with industry, and to take thoughtful
18 consideration of our input and comments and incorporate
19 that into program design and proposals.

20 I want to specifically echo what Brad Heavner
21 with CALSSA was just saying, specifically support for an
22 open enrollment program as that was mentioned as a
23 potential opportunity or pathway for future DEBA funds.
24 Very similar concerns and thoughts as Brad is that waiting
25 too long to develop this type of program, either could be

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1 too late to get projects online, or it could mean that too
2 much funding has already gone out the window and not enough
3 is available for an open incentive program. So we'd really
4 encourage creation of an open incentive program before
5 funding, before too much funding has already been
6 allocated.

7 And also am available and eager to work with the
8 Energy Commission, provide input on best practices. And
9 from our perspective, what would be the best ways to create
10 and administer this type of program that would be
11 beneficial for industry and ultimately beneficial for
12 ratepayers in providing the type of backup services that
13 the Commission wants to see. Thank you.

14 MS. BADIE: Thank you.

15 That's all the raised hands we have. Back to
16 you, Vice Chair.

17 VICE CHAIR GUNDA: Thank you, Mona.

18 I just want to see if Deana or Hudson have any
19 responses to any other comments that were raised in the
20 initial comments?

21 MR. SPIVEY: Thank you, Vice Chair. I'd like to
22 thank everyone for providing their public comments today.
23 I do have a few responses. The concern that Scott Lipton
24 brought up about dual participation, it's something we're
25 exploring. I'll note that we have two concerns there that

1 that staff are currently looking into and figuring out how
2 to balance with stakeholder interests in maximizing their
3 value through various programs.

4 The first is that some of these programs have
5 their own performance requirements. And so we'd want to
6 make sure that the DEBA statutory requirement that they
7 participate is an on-call emergency resource wouldn't run
8 counter to any performance requirements for any other
9 program.

10 The other is a concern with double compensation
11 or overcompensation of resources for doing what they've
12 been funded to do through the DEBA Program.

13 And I guess I could just have thirdly is when we
14 think about deep investments in the Strategic Reliability
15 Reserve we're thinking about a stack or a fleet of
16 resources that can be called upon in an emergency, which we
17 can forecast or anticipate based on the total DEBA funds
18 and projects that have been funded through our program.

19 And so if there were to be double counting occur
20 OS programs of resource totals or megawatt totals, there is
21 a concern that how do we ensure that DEBA resources are
22 truly there to serve in an emergency and haven't been
23 counted toward some other programs' totals and already been
24 operating.

25 And we do appreciate the continued advocacy for

1 an open enrollment incentive program. As I tried to make
2 clear in our presentation, it's something we're actively
3 considering. It's not anything we're moving slowly on. We
4 have had conversations with some of the stakeholders, and
5 we've reviewed their comments. We have our subject matter
6 experts and technical staff looking very closely at those
7 to think about that.

8 I will say one of the challenges there as I noted
9 in our presentation, the CPUC has a self-generation
10 incentive program, which covers a lot of the same
11 technologies. We have read the advocacy about that, but we
12 want to ensure that we don't again overfund a suite of
13 resources. And want to use the most effective approach in
14 allocating DEBA dollars, perhaps to technologies that
15 aren't as supported but can provide a reliability benefit.

16 But there's a lot that's complex there, so to the
17 recommendation to host a stakeholder working group or
18 something of that nature we're very interested in, and look
19 forward to following up on that. And yes, really
20 appreciate those comments. Thank you.

21 VICE CHAIR GUNDA: Thank you, Hudson. I just
22 want to begin by just thanking the stakeholders who have
23 been working very closely with the CEC staff. And also
24 just the comments that were made: Scott, Frank, Meredith,
25 Brad, and Jon, thank you for providing your comments. And

1 just really appreciate the stakeholder advocacy with the
2 Legislature in developing this funding and kind of creating
3 these programs. So I really appreciate the holistic nature
4 of our work here.

5 I think I want to also thank Hudson to you, I
6 know you have the difficult job of working with Ashley
7 every day and Deana. But just the entire team on how
8 wonderful you guys have been in terms of moving
9 expeditiously, but also really thoughtfully.

10 I particularly just want to thank Deana for her
11 leadership and setting the tone at a Division level on all
12 these difficult programs in creating the necessary steps of
13 stakeholder engagement.

14 I really liked the idea of the stakeholder
15 working group as you just mentioned. Having the
16 opportunity to potentially cut down the time on creating
17 the GFO, but also aligning on the GFO ahead of time. So
18 really support that path, as you just noted.

19 I also want to make sure in the comments that you
20 originally provided, you know the support for the POUs, you
21 know, the 25 percent and the potential overlap with the 50
22 percent as well. So really appreciate the team taking a
23 thoughtful approach in making sure the money is well
24 allocated.

25 I also understand and hear both internally your

1 briefings, but also today just the opportunity between the
2 large scale deployment of the distributed assets through
3 the challenge grants but also in a more programmatic
4 approach. Given that we have one more wrench in this,
5 which is the potential VPP federal funding in the LPO I
6 really would like us to potentially have a meeting with the
7 stakeholders to just think through what the federal funds
8 could mean to the expansion of DEBA. And bring that back
9 to consideration for our work, either as an office or here
10 in a public meeting. I think it will be helpful to just
11 have that conversation.

12 But overall, I'm incredibly impressed with the
13 efforts that the team has put in. I look forward to
14 supporting this item to move forward.

15 I just will see.

16 COMMISSIONER MONAHAN: Yeah, just quickly. I
17 mean, I think last year you guys stood up the SGS like in
18 record speed. No program had ever been stood up so
19 quickly. And I think DEBA falls on the heels of this, like
20 just creative efforts to help the state support a more
21 reliable electricity system. I just want to thank you,
22 Hudson, and Deana, and the whole team for all that you've
23 done to make sure that we can spend these monies wisely.
24 And we're listening to stakeholders.

25 And thanks also to the Vice Chair for his

1 leadership.

2 VICE CHAIR GUNDA: Commissioner McAllister?

3 COMMISSIONER MCALLISTER Yeah, maybe I'll just
4 step in. Yeah, the numbers we are talking about at this
5 meeting of pushing out into the marketplace are staggering,
6 really. I mean, when you add up the numbers it's a billion
7 plus dollars we're talking about between the equitable
8 building decarb and this program. And then items to come
9 still this afternoon. So I just want to acknowledge what a
10 responsibility that is and how seriously we all take it.
11 And I think your comments about staff and really their
12 groundedness and their seriousness and professionalism and
13 competence just inspire a lot of confidence. And I think
14 the Legislature sees that, and the Governor's Office sees
15 that.

16 And really these are difficult problems of the
17 day, and we're trying to solve them. And that takes big
18 bets and that's the California way. So I'm just really
19 proud of this team that got this item to this point, as
20 well as all the other all the other items they've been
21 working hard on. So thanks to Deana and the team and for
22 your leadership as well, Vice Chair.

23 VICE CHAIR GUNDA: Thank you. Thank you,
24 Commissioner McAllister. I just also want to note Erik
25 Lyon's contribution. I just want to highlight when he was

1 in our office he could not put up with us anymore, so he
2 moved into the RREDI Division under Deana, so I'm glad he's
3 in a safer space.

4 With that I'm just looking to a motion.

5 COMMISSIONER MONAHAN: I move to approve this
6 item.

7 COMMISSIONER GALLARDO: I second.

8 VICE CHAIR GUNDA: I will take the vote now.
9 Commissioner Monahan.

10 COMMISSIONER MONAHAN: Aye.

11 VICE CHAIR GUNDA: Commissioner Gallardo.

12 COMMISSIONER GALLARDO: Aye.

13 VICE CHAIR GUNDA: Commissioner McAllister?

14 COMMISSIONER MCALISTER: Aye.

15 VICE CHAIR GUNDA: I vote aye as well. The vote
16 count is 4-0 and the motion passes.

17 I'm going to step out just for a minute here.
18 I'm going to have Commissioner Gallardo lead the next item.
19 I'll be right back. Thank you.

20 COMMISSIONER GALLARDO: All right, so let's go to
21 Item 12. Staff's Gas Research and Development Program 2023
22 Annual Report. I welcome Molly O'Hagan to present.

23 MS. O'HAGAN: Thank you. Good afternoon,
24 Commissioners. My name is Molly O'Hagan and I am the
25 Supervisor of the Strategic Analysis Unit in the Energy,

1 Research and Development Division. Today, I'm happy to
2 present this year's Gas R&D Annual Report covering fiscal
3 years 2022 to 2023. Next slide, please. Thank you.

4 The report provides the Legislature, the CPUC,
5 and the public a summary of the CEC's gas R&D progress, its
6 impacts, and its ratepayer benefits. Due to the CPUC on
7 October 31st, the report covers the topics that are shown
8 on this slide. I'll jump right into the main points that
9 are bolded. Next slide, please.

10 Highlighting benefits to Californians. This
11 program invests in gas research, development, and
12 demonstration to ensure that the California gas system is
13 cost effective and safe while striving towards an equitable
14 de-commissioning. This year we're pleased to share some of
15 the cumulative impacts of our research projects shown on
16 this slide. Unless otherwise noted, this data reflects
17 totals since 2004. In the interest of time, I won't cover
18 all of them today. However, I'd like to direct your
19 attention to a key takeaway. What is essentially a 20
20 times return on investment in the program since its
21 inception. Next slide, please.

22 Next, we have a snapshot of our total funding
23 across the six principal investment areas since the
24 inception of the program, demonstrating our investment
25 priorities over time. These areas include building

1 decarbonization, gas system decarbonization, industrial and
2 agricultural innovation, transportation, resiliency, health
3 and safety, and entrepreneurial investment. Next slide,
4 please.

5 So stepping into our project highlights for this
6 year, this project is part of our gas system
7 decarbonization portfolio and addresses the need for
8 careful planning to manage and mitigate the future costs
9 associated with maintaining the gas system. As
10 electrification proceeds more and more customers are
11 expected to depart the gas system. If left unmanaged, a
12 shrinking group of remaining gas customers would be
13 covering the cost of maintaining the system.

14 Energy and Environmental Economics, Incorporated
15 or E3 has coordinated with Gridworks, East Bay Community
16 Energy, Environmental Justice Solutions, and PG&E to
17 leverage PG&E's Gas Asset Analysis Tool. And develop the
18 framework for identifying and prioritizing sites for
19 targeted electrification and tactical gas de-commissioning
20 projects within the utilities gas distribution system.

21 So the framework determined 11 candidate sites
22 with 1,500 Total customers in Oakland, Hayward, and San
23 Leandro, that meet several criteria as part of a draft
24 schema such as hydraulic feasibility, gas system avoidable
25 costs including pipeline replacement, operations and

1 maintenance. As well as having a high likelihood of near-
2 term capital projects. So across the initial 11 sites
3 analyzed strategic gas decommissioning results and net
4 benefits of approximately \$12,000 per customer once gas
5 pipeline avoided costs and avoided gas revenue requirement
6 benefits are factored in.

7 So the project team then evaluated community
8 priorities, recognizing that communities that are more
9 receptive to gas alternatives may be more likely to engage
10 in electrification efforts. In total, 3 of the 11 sites
11 were selected as the project's pilot communities, and this
12 covers more than 360 gas meters. While the project is just
13 in its first phase, which covers the design and development
14 of the plans, if deployed the resources are anticipated to
15 provide up to \$9.7 million total and avoided costs from gas
16 main replacement across the three selected sites. Next
17 slide, please. Thank you.

18 This year among our agricultural and industrial
19 innovation projects, we've chosen to highlight the efforts
20 of Element 16 who demonstrated the first economically
21 viable, low temperature industrial heat capture system with
22 energy storage. This is big news for the chemical
23 industry, which while one of the largest industries
24 worldwide with an annual revenue of more than point 4.5
25 trillion, is also the second largest user of primary energy

1 in the United States after only the petroleum industry. So
2 representing almost a fifth of all manufacturing energy
3 consumption in the US, chemical manufacturing is one of
4 several heavy industries that are proven difficult to
5 decarbonize. Because of both the direct emissions that are
6 a byproduct of chemical reactions, as well as emissions
7 from processes dependent on very high heat, or even fossil
8 fuels as feedstock.

9 With Element 16's low temperature industrial heat
10 capture system and stored technology, chemical
11 manufacturers can reduce gas consumption and the associated
12 GHG emissions through process heat efficiency upgrades.
13 That's because when processing plants are not operating at
14 peak efficiency be it due to weather, production volume, or
15 maintenance outages, Element 16's system captures excess
16 heat and stores it for future use. This stored thermal
17 energy serves as a buffer for intermittent thermal
18 processes, smoothing out the thermal load at the facility
19 and reducing thermal shocks to equipment.

20 The system can also act as a backup heat supply,
21 discharging heat during unexpected process heat shortages
22 and outages and adding redundancy to critical production
23 systems. With Element 16's heat capture system first
24 installed at a chemical processing plant in Southern
25 California just in May 2022 this project is already saving

1 the facility 10s of 1000s of dollars in annual gas and
2 water costs. The project is demonstrating to the chemical
3 industry that heat capture systems can reliably improve
4 plant economics. Next slide, please. Wonderful.

5 So next we have a future project from our --
6 apologies -- from our transportation portfolio. Let's see,
7 communities living and working near rail operations at
8 ports, rail yards and other locations bear a
9 disproportionate health burden due to their proximity to
10 harmful emissions. The California Air Resources Board
11 recently approved the in-use locomotive regulation
12 establishing zero emission requirements for locomotives
13 operating in California starting in 2030. But better
14 understanding of zero emission technologies like hydrogen
15 fuel cells, is needed to help inform and promote adoption
16 within the real sector. As the gas system evolves to
17 potentially support clean hydrogen conveyance in the
18 future, the rail sector could be an important end use to
19 target.

20 One possible avenue for early intervention are
21 switcher locomotives, which perform first and last mile
22 freight rail functions at ports and rail yards. California
23 has more than 800 such locomotives in use, which are often
24 older with minimal emission mitigating after treatments,
25 degrading air quality, and communities located around the

1 streets, ports, and rail yards.

2 The Institute of Gas Technology or GTI Energy and
3 its project partners have been working to integrate a
4 hydrogen fuel cell module, onboard hydrogen storage, and a
5 battery module to collectively provide an efficient zero
6 emission alternative to diesel switcher locomotives. And
7 to chart a path for hydrogen fuel cell technology in real
8 applications across the state.

9 GTI is building and soon will be demonstrating in
10 quarter one of 2024, a hydrogen fuel cell switcher
11 locomotive with Sierra Northern Railway, a Class III short
12 line railroad that operates around the Port of West
13 Sacramento. The new zero emission switcher locomotive will
14 displace up to 10,000 gallons of conventional diesel fuel
15 consumption per year.

16 Additionally, the project is anticipated to
17 displace 138 tonnes of CO2 as well as 3 tonnes of nitrogen
18 oxides and 200 kilograms of PM 10 annually, reducing air
19 pollution and the associated negative health impacts for
20 the surrounding communities. Next slide, please.

21 Okay, so I think we might have missed a slide,
22 but let's go on to a sensor technology for gas storage
23 safety monitoring developed by LBNL. Can you - yeah, can
24 we look back one? It should have been before that. There
25 we go. I knew there was one and hiding from us, apologies.

200

1 So this is from our building decarbonizations
2 portfolio. Hospitals now rank as the second largest user
3 of energy per unit of floor area and of all building types
4 in California. Nationwide, there's been a more than 30
5 percent increase in healthcare-related GHG emissions over a
6 10-year period. That's based on a 2016 study which appears
7 to be the latest such study.

8 California Loan is home to more than 330
9 hospitals, providing critical services to millions of
10 Californians. Decarbonizing these facilities is
11 challenging. Efforts must balance the need for increased
12 energy efficiency and reduced energy costs with patient
13 safety and the maintenance of hospital operations.

14 To provide comprehensive guidance and support key
15 stakeholders Mazetti, an employee owned benefit corporation
16 created the Decarbonizing Health Care Guidebook: A Living
17 Resource for Emerging Efficiency Equipment and Systems. So
18 this resource, available online and free to the public, is
19 intended to aid hospitals in planning and designing
20 retrofit projects to substantially reduce operating costs
21 and to provide customized design improvements.

22 The guidebook introduces users to more than 25
23 decarbonizing technologies and their related benefits,
24 outlines barriers to implementation, provides financial
25 analysis and business cases, and presents case studies.

1 It's intended as a living resource allowing users and
2 stakeholders to post new knowledge, ask questions, and
3 report on progress.

4 Okay, now we can jump back ahead there. Thank
5 you.

6 So we'll finish off here with an innovation and
7 sensor technologies for gas storage safety monitoring
8 developed by LBNL. Roughly two-thirds of underground gas
9 storage wells in California were drilled before the 1980s.
10 After decades of degradation and corrosion caused by the
11 frequent injection and withdrawal of gas, borehole
12 integrity is a growing concern. Current California
13 Geological Energy Management Division Regulations require
14 inspections to assess well integrity every two years unless
15 otherwise justified. This process can be intrusive,
16 disruptive, and expensive.

17 LBNL, in close coordination with PG&E, has
18 developed, lab tested, and is now field demonstrating an
19 integrated and real time suite of gas storage wellbore
20 operation and integrity monitoring technologies. Their
21 method uses an optical fiber and Electromagnetic Time
22 Domain Reflectometry or EMTDR, are to send electromagnetic
23 waves into a conductive material like the steel of well
24 casings. Then based on the signal received back,
25 degradations can begin to be identified in forming

1 priorities for repairs, or even opportunities for de-
2 commissioning.

3 This EMTDR technology provides real-time
4 operation status monitoring and does not require any
5 additional downhole equipment to be installed. When
6 coupled with the optical fiber technology, users can
7 increase monitoring and diagnosis confidence, reducing the
8 chances of false alarm. Fiber optic cables, which would
9 require installation inside the borehole casing, can
10 continuously monitor strain and temperature changes due to
11 borehole vibration, deformation, and leakage.

12 While still an early stage technology, the
13 optical fiber and EMTDR can help us better understand well
14 degradation trajectories. And optimize maintenance
15 priorities to lower costs and minimize disruptions while we
16 identify opportunities for decommissioning. Looking
17 forward, the project team is considering the potential to
18 connect the technologies through operation controls,
19 enabling autonomous emergency shutoffs. Next slide,
20 please.

21 Lastly, staff recommends the Commission approve
22 the Gas R&D 2023 Annual Report. That concludes my
23 presentation. And I have technical staff on hand both here
24 and online for any specific questions you may have. Thank
25 you.

1 COMMISSIONER GALLARDO: Thank you, Molly, for a
2 great presentation. I will note that Vice Chair Gunda is
3 back at the dais, but I will continue on this item. Let's
4 see if we have any public comment on Item 12.

5 MS. BADIE: Thank you. This is Mona Badie, th
6 Public Advisor of the California Energy Commission. We're
7 going to take public comment in the room first for anyone
8 that uses a QR code, or anyone in the room that would raise
9 their hand. I'm not seeing anyone in the room, so I'm
10 going to transition to Zoom.

11 So on Zoom, if you could use the raise hand
12 feature at the bottom of your screen to notify us you'd
13 like to make a comment or pressing *9 if you're joining us
14 by phone.

15 And I'm not seeing any comments on Zoom. So back
16 to you, Commissioner.

17 COMMISSIONER GALLARDO: Thank you. I just want
18 to note that I really appreciate all of the diversity in
19 the applications that you've demonstrated to us, Molly.
20 It's really exciting to see all of the different work. And
21 then also I appreciate you showing us the impact also of
22 all of these different examples that you gave us.

23 So I wanted to turn to my Commissioners, fellow
24 Commissioners, to see if there was any comment you wanted
25 to make.

1 COMMISSIONER MONAHAN: No, just like you
2 Commissioner Gallardo, I really appreciated that. I mean,
3 it was really quite an expansive set of energy technologies
4 and guidebooks. And so just really appreciate the
5 diversity of investments and thank you for that great
6 presentation.

7 COMMISSIONER MCALLISTER And I would just jump in
8 and reiterate the thanks. And identifying highly, sort of
9 leverageable topics to invest in gas R&D is challenging in
10 this time of transition. And so I just want to commend the
11 staff are really having their thinking caps on and really
12 doing innovative work in this arena.

13 And I do -- I'm going to have to step off after
14 this item. So after the vote I just want to make one very
15 brief comment.

16 COMMISSIONER GALLARDO: All right, any other
17 comments? (No audible response.)

18 Okay. Commissioner McAllister, would you like to
19 move this Item Number 12?

20 COMMISSIONER MCALLISTER: I move Item 12.

21 COMMISSIONER GALLARDO: Commisure Monahan, would
22 you like to second?

23 COMMISSIONER MONAHAN: I'll second.

24 COMMISSIONER GALLARDO: All right. Let's take the
25 vote. Commissioner McAllister.

1 COMMISSIONER MCALLISTER: Aye.

2 COMMISSIONER GALLARDO: Commissioner Monahan.

3 COMMISSIONER MONAHAN: Aye.

4 COMMISSIONER GALLARDO: Vice Chair Gunda.

5 VICE CHAIR GUNDA: Aye.

6 COMMISSIONER GALLARDO: And I vote aye. That's
7 4-0. This item passes. Go ahead, Commissioner McAllister.

8 COMMISSIONER MCALLISTER Great. Thank you very
9 much, Commissioner Gallardo.

10 I do have to step away from the meeting. I was
11 really hoping to amplify the Chair's comments at the
12 beginning of the meeting about the Building Electrification
13 Summit that we held last week. Just so many staff to
14 thank, such an amazing job, really a optimal use of our
15 beautiful LEED Platinum building. So we're sort of really
16 well positioned as both message and messenger.

17 And the staff just really stepped up. It was a
18 partnership with the Electric Power Research Institute.
19 They were great partners. The DGS staff that was
20 responsible for the building and logistics, they did a
21 great job.

22 I do want to single out also the Public Advisor's
23 office, particularly Dorothy, but also Mona for lending
24 Dorothy to this effort to get across the finish line. But
25 nothing but good comments from stakeholders and

1 participants. I really feel like we've put a big stake in
2 the ground for building electrification as a key,
3 decarbonizations strategy.

4 And the timing just I think really worked out
5 well. And so and you likely saw, but I'll say it, the
6 highlight of it was a commitment by 10 of the largest
7 global manufacturers of heat pump water heaters and space
8 heating appliances to help us achieve our six-month heat
9 pump goal by 2030. And so very great positive movement,
10 we're going to move this market and really get the hockey
11 stick turned upward.

12 And finally, I just want to thank my Chief of
13 Staff, Bryan Early for being the sort of Chief Strategy
14 Officer of the whole event and just really the emcee. And
15 just really played a central role in putting it all
16 together and provided a lot of leadership and
17 organizational abilities, and just really appreciate him as
18 well.

19 So with that, I will step away from the meeting,
20 but just really want to -- so proud of our staff, and
21 partners, and the collaboration. So I just wanted to say
22 that, because I'm going to miss the comments. But thanks
23 very much, everyone. And sorry to leave the bare minimum
24 here as far as the quorum, but thanks a lot.

25 VICE CHAIR GUNDA: Thank you, Commissioner

1 McAllister.

2 So let's move to Item 13. We still have a number
3 of items, so we'll evaluate if we want to cut out any items
4 at the end depending on whether we have a quorum or not.
5 But for now we have a quorum, so let's keep moving. Item
6 13. I welcome Mithra.

7 MS. MOEZZI: Good afternoon, Vice Chair and
8 Commissioners. I'm Mithra Moezzi with the Energy Research
9 and Development Division. Staff is requesting approval of
10 a \$1.2-million agreement with Lawrence Berkeley National
11 Laboratory. This agreement is intended to improve
12 recognition of undercounted costs of long-duration
13 widespread power outages in disadvantaged communities. And
14 to support integration of these costs into energy
15 resilience investment decisions. The next slide, please.

16 Since the massive public safety power shutoffs
17 four years ago this month, there's been much more attention
18 to the nature of energy resilience. Traditionally,
19 reliability investments have been justified in terms of
20 their ability to avoid certain economic costs of outages,
21 such as loss of utility revenue without recognizing other
22 societal costs such as health and personal economic
23 impacts, or costs that can incur when outages coincide with
24 extreme weather conditions such as wildfires and high
25 temperatures. The proposed research would investigate

1 undercounted costs of long duration outages in detail, and
2 facilitate using this information to improve the precision
3 and equity of resilience investments.

4 Results will inform both Adaptation Planning and
5 General Rate Case timeframes.

6 The project also benefits Californians by
7 developing and promoting an analytical framework that
8 better integrates people in their diverse contexts,
9 experiences, and interactions with energy and its hardware,
10 into resilience planning and technology decisions. Next
11 slide, please.

12 In summary, the proposed research will focus on
13 understanding undercounted costs of power outages in two
14 disadvantaged communities.

15 It will develop methods to monetize these costs.

16 And it will take steps to integrate these costs
17 into resilience investments and their frameworks, including
18 the Interruption Cost Estimate Calculator funded by the US
19 Department of Energy.

20 By considering these undercounted costs, results
21 are expected to support increasing the allocation of funds
22 to resilience investments in disadvantaged communities as
23 well as improving the resilience investment choices made in
24 those areas. Next slide, please.

25 Staff recommends adoption of staff determination

1 that the project is exempt from CEQA, and approval of this
2 agreement. And that concludes my presentation.

3 VICE CHAIR GUNDA: Thank you, Mithra, let's go to
4 public comment.

5 MS. BADIE: Thank you. This is Mona Badie, the
6 Public Advisor for the California Energy Commission. The
7 Energy Commission is now accepting public comment on Item
8 13. If you're in the room with us we'd ask that you use
9 the QR code and also raise your hand.

10 I'm not seeing anyone in the room, so I'm going
11 to transition to Zoom. If you're on joining us by Zoom,
12 you can notify if you'd like to make a public comment by
13 using the raise hand feature at the bottom of your screen,
14 or pressing *9 if you're joining us by phone.

15 And I'm not seeing any hands raised. So back to
16 you, Vice Chair.

17 VICE CHAIR GUNDA: Thank you, Mona.

18 Any comments from the dais? Please,
19 Commissioner.

20 COMMISSIONER GALLARDO: Thank you, Mithra, for
21 that wonderful presentation. And for it being brief too
22 given our limitations today. But I just wanted to check
23 in, if you could talk to us a little bit about what you
24 mean by disadvantage, vulnerable communities? I think
25 that's a different term that we use and would appreciate if

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1 you could expand on that.

2 MS. MOEZZI: Yes, that's used in CPUC adaptation
3 rulemaking. And it was developed a few years ago. So it
4 includes CalEnviroScreen's definition of disadvantaged
5 communities, as well as tribal communities, as well as low
6 income as defined at the 60 percent level. So it's a bit
7 more expansive than that. And the intent there was to get
8 more at vulnerability to outages in addition to pollution
9 burdens. And this can be used then, so the utilities and
10 IOUs have to develop up plans, adaptation plans, and they
11 will be using that definition there. So this is the
12 connection to the CPUC rulemaking.

13 COMMISSIONER GALLARDO: Okay, thank you for that.
14 I do really support this concept of figuring out how we can
15 do better for those disadvantaged, vulnerable communities
16 that lose their power and, you know, impact them even worse
17 than other folks. So thank you, Mithra, for bringing this
18 forward. I support it.

19 VICE CHAIR GUNDA: Thank you, Mithra. I just
20 wanted to, you know, raise this issue. You know, when we
21 saw outages in both 2020 and some of the rolling outages in
22 '21 whether it's because of fire or PSPS (phonetic) it has
23 been really hard to understand where those outages are
24 happening. And who's being impacted more. So I think
25 particular work will really address that as well in terms

1 of the equity of the outages. And how we are planning to
2 make sure you know, they're equitable, right? So thank you
3 for pushing this forward. I look forward to supporting it.

4 So with that, Commissioner Gallardo, would you
5 like to move the item?

6 COMMISSIONER GALLARDO: I move Item 13.

7 COMMISSIONER MONAHAN: I second.

8 VICE CHAIR GUNDA: Okay, we'll go to the vote
9 now. Commissioner Gallardo.

10 COMMISSIONER GALLARDO: Aye.

11 VICE CHAIR GUNDA: Commissioner Monahan.

12 COMMISSIONER MONAHAN: Aye.

13 VICE CHAIR GUNDA: And I vote aye as well. It
14 gets 3-0. The motion passes. Next item, Item 14.

15 MR. CHEN: Good afternoon Chair, Vice Chair, and
16 Commissioners. I'm Peter Chen. I'm a Supervisor with the
17 Energy Research and Development Division. I'm presenting
18 this item with Smartville in place of Bryan Lee today. So
19 this is a proposed EPIC award with Smartville, Inc. from
20 the solicitation titled "Cost Share for Federal Clean
21 Energy Funding Opportunities." Next slide, please.

22 Battery energy storage installations within
23 California's electricity system have grown from just 250
24 megawatts of installed capacity in 2019 to over 5,000
25 megawatts today. These batteries play an essential and

1 growing role in managing the electricity grid by lowering
2 energy costs, ensuring reliability, and allowing the
3 greater use of renewable generation. Recent supply chain
4 disruptions and rapid demand have highlighted the need for
5 sustainable alternatives to battery sourcing and reducing
6 dependence on extraction or mining of new materials.
7 California's transportation electrification goals will lead
8 to many Lithium ion batteries being retired from electric
9 vehicles in the future. Many of which may still be
10 suitable for second-life applications such as stationary
11 storage.

12 As shown in the figure, Smartville's battery
13 repurposing technology better enables the use of retired EV
14 batteries from multiple suppliers for grid-scale energy
15 storage, extracting additional value and battery life
16 before finally recycling to recover critical materials.
17 This approach supports a circular and more sustainable
18 supply chain for meeting California's energy storage needs.

19 This proposed project is also a federal cost
20 share award leveraging nearly \$6 million of Bipartisan
21 Infrastructure Law funding from the U.S. Department of
22 Energy. Smartville has previously developed and initially
23 piloted their second life repurposing technology through
24 DOE's ARPA-E program as well as prior EPIC grants. With
25 this award and continued collaborative support from CEC's

1 EPIC Program and DOE, Smartville will be able to accelerate
2 their technology development, validate their products with
3 a key California customer segment and plan for continued
4 expansion and commercialization.

5 The project will also create approximately 15
6 jobs between positions at research institutions and
7 operations and maintenance contractors. Next slide,
8 please.

9 This project with Smartville will improve upon
10 their innovative "Life Balancing Controls" technology,
11 which actively manages the life long-term performance of
12 repurposed EV batteries using data produced from monitoring
13 and predictive models. The improvements will enable
14 greater battery state of health uniformity and increase
15 cycle life by 30 percent. Smartville will also improve
16 energy density and manufacturability of the system by
17 optimizing use of space within their battery enclosure.
18 Safety improvements will be made with a focus on NFPA
19 compliance including off gas detection, prevention of
20 thermal runaway, and active venting measures.

21 Building on lessons learned from their initial
22 pilot system at UC San Diego, which is shown in the slide
23 in the top right figure, Smartville will install a 500
24 kilowatt hour testbed version of their improved second life
25 battery storage system at their headquarters in Carlsbad.

1 They will also build and demonstrate a 3 megawatt
2 hour system with Wellhead Electric, an independent power
3 producer that develops, owns, and operates electricity
4 generation and storage assets that participate in
5 California ISO markets.

6 As shown in the bottom figure, Smartville's
7 system will be co-located with existing solar, storage, and
8 gas generation at the Wellhead site located east of the
9 city of San Joaquin in Fresno County. The Wellhead site
10 will showcase the system in a real-world deployment to
11 reliably provide the same grid services as an energy
12 storage system using new batteries.

13 Additionally, the Wellhead project site is
14 located in and around disadvantaged communities.
15 Smartville will be coordinating with local environmental
16 justice advocates and educational groups to address and
17 quantify community benefits based on the demonstration as
18 well as future potential deployments. The successful
19 demonstration of this system will help bring a cost-
20 effective and sustainable second-life energy storage
21 solution to the market. Next slide.

22 Staff recommends approval of this grant agreement
23 with Smartville, and adoption of staff's determination that
24 this action is exempt from CEQA. That concludes my
25 presentation and I'm available to answer any questions.

1 VICE CHAIR GUNDA: Thank you, Peter.

2 Let's go to public comment.

3 MS. BADIE: Thank you. The Commission now
4 welcomes public comment on Item 14. And I'm not seeing
5 anyone in the room. I'm going to transition to Zoom. If
6 you'd like to comment on Item 14 Please use the raise hand
7 feature on your screen or *9 if you're joining by phone.

8 We have Grant Berman. Grant, I'm going to open
9 your line. Please spell your name for the -

10 COMMISSIONER GALLARDO: I'm sorry to interrupt
11 you. It's Item 13, correct? Just to make sure we're not
12 confused or am I confused?

13 MS. BADIE: Item 14.

14 COMMISSIONER GALLARDO: 14? Okay, thank you. My
15 apologies.

16 MS. BADIE: Thank you.

17 Okay, Grant, I'm going to open your line. If you
18 can please spell your name for the record and announce any
19 affiliations. We're asking for comments to be two minutes
20 or less. Grant, if you can unmute on your end and begin

21 MR. BERMAN: Grant, G-R-A-N-T. Good afternoon,
22 Commissioners and thank you for your time today. My name
23 is Grant Berman. I'm CFO at Smartville and we're based in
24 Carlsbad, California. We're very excited about this
25 opportunity and we want to thank the Commission for your

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1 ongoing support. The CEC match fund will allow Smartville
2 to bring federal investment dollars into California for
3 clean energy. And this match fund has been added to 6
4 million of funding from the Department of Energy. And as a
5 result, 5 million of the 6 million will be spent here in
6 California.

7 From a previous CEC grant, we were able to
8 install a behind-the-meter storage system. This grant will
9 enable us to build our first utility scale project, which
10 is co-located with a peaker plant, which will help address
11 those times when the state's grid is most at risk.

12 This project will also enable Smartville to
13 accelerate its development schedule, and time to market to
14 provide sustainable and scalable energy solutions to
15 California, and resulting in benefits to the California
16 ratepayers. Thank you for your time.

17 MS. BADIE: Thank you.

18 We do not have any other raised hands back to
19 you, Vice Chair.

20 VICE CHAIR GUNDA: Thank you.

21 Peter, just a quick question or, you know, the
22 representative from the company? What -- in two parts, one
23 is what's the expected levelized cost of energy? I mean,
24 in terms of new batteries versus second life is like a
25 percent lower. And also, are we beginning to kind of

1 forecast the amount of potential used batteries that are
2 going to keep coming out of the market?

3 MR. CHEN: Yeah, so I think we're still in a
4 learning phase of what that levelized cost of energy could
5 be. It depends quite a bit from the source of the battery
6 supply. And, you know, I think Smartville's technology is
7 also going to play a role in improving the economics of
8 this, because the important piece is that cycle life of the
9 second life batteries and how far they can last in their
10 second life application. That again depends on the state
11 of health with the batteries that they're received in.

12 So there's a lot of factors and a lot of learning
13 to be done to understand those numbers. And I think this
14 project will be important in understanding that. I don't
15 know if Grant on the line has anything else he wants to
16 share from his perspective.

17 VICE CHAIR GUNDA: Grant, are you still there
18 with us? Would you like to comment on that?

19 MS. BADIE: Grant, if you'd like us to open your
20 line, just use the raise hand feature.

21 Okay, great. I've opened your line.

22

23 MR. BERMAN: Sure. I think I echo what Peter
24 says, we're still trying to figure out what some of those
25 costs are with this being the first utility scale one that

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1 we're doing. I think this project is going to help us go a
2 long way to determining what those costs are.

3 VICE CHAIR GUNDA: Thank you, Peter, and Grant.
4 So I think that I would love to follow up with you, Peter,
5 just to kindly understand the market opportunity. And
6 would like you to just follow up with the SB 100 team and
7 the Reliability team to think about how second life
8 batteries could potentially support the grid at scale in
9 the 2045 space.

10 MR. BERMAN: Yeah, thank you.

11 MR. CHEN: So if I may, I think I missed the
12 second question about the kind of potential supply of
13 batteries from EVs. So, you know, if you take on average an
14 EV battery may have like a 50 kilowatt hour battery pack.
15 So if you look at the number of EVs in California and
16 beyond it's quite a substantial number that could come out
17 of the vehicle market. And then some percentage of that
18 may be suitable for second life storage. I think there's
19 still some fuzziness and understanding of what that
20 percentage looks like in the future.

21 There's also evolutions happening with battery
22 storage for EVs. So there's definitely a lot of learning
23 there as well. But the kind of base potential is very high
24 and I think that's why we're really interested in exploring
25 this space.

1 COMMISSIONER MONAHAN: Well, I love this project.
2 And I also love the fact that it's building off CalTestBed.
3 That we've been sort of supporting this company from its
4 infancy, now it's moving into more of a not just early
5 stage, but actually trying to provide utility scale
6 storage.

7 And I think we don't have all the answers but as
8 you said, Peter, there's a lot of batteries that are going
9 to come. And I think what we -- we don't know how to
10 successfully integrate all the different types of batteries
11 that are coming. And so these companies, there's a few in
12 this space, are really, you know, front runners in this.
13 Trying to figure out well, how do you put together a LEAF
14 battery with a VW battery with a Tesla battery.

15 And you know, there's a lot of I think it's --
16 and the battery chemistries are changing. So there's, I
17 think, a lot of opportunity, but also a lot of room for
18 research to figure out how to do this in a way that's cost
19 effective. And I would say coming on the heels of the DEBA
20 vote in terms of just this opportunity for clean resources
21 to play an important role in California's energy future and
22 reliability future. I mean, that's the opportunity.

23 And in terms of just I've had a concern that
24 because of domestic content requirements that we may have,
25 you know, that we want to make sure that second life EV

1 batteries, that they're used for storage before they move
2 into recycling, if possible. And these kinds of projects
3 really give us more information to be able to evaluate what
4 their capacity could be to support the grid. So just I
5 strongly support this project. And, you know, really will
6 be curious to be able to visit the site once it moves
7 forward.

8 VICE CHAIR GUNDA: Thank you, Commissioner
9 Monahan.

10 Commissioner Gallardo?

11 COMMISSIONER GALLARDO: Peter, I wanted to say
12 thank you for doing such a great job presenting Item 14,
13 especially since you are coming in to sub.

14 I wanted to also focus on the community benefits
15 piece that you mentioned. That got my attention, because
16 we are trying to do better on defining benefits for
17 communities and not assuming that because project is
18 located in a disadvantaged community or low-income
19 community that that is automatically a benefit. So would
20 you be able to speak a little bit further about the work
21 you all are doing on that front?

22 MR. CHEN: Yeah, absolutely. So Smartville is
23 working with, as I mentioned in the presentation, some
24 environmental justice advocates as well as educational
25 groups located near the site. So that includes Central

1 California Environmental Justice Network, California
2 Environmental Justice Alliance, Fresno City College and
3 California State University Fresno.

4 I think also as I mentioned, and Grant mentioned
5 as well, this is a site with an existing gas power plant, a
6 peaker plant. So I think one of the kind of major benefits
7 that we want to quantify is, you know, the use of this
8 second life storage system to maybe reduce reliance on that
9 peaker plant. And there could be other locations like this
10 where we can see that reliability connection, and using a
11 sustainable source of batteries for these reliability use
12 cases and reducing our dependence on existing peaker
13 plants.

14 COMMISSIONER GALLARDO: Fantastic, I might poke
15 you later on to get some more information. And also would
16 encourage you to work with the Office of the Public
17 Advisor, Energy, Equity and Tribal Affairs as I think
18 Mona's doing some work leading this effort to figure out
19 benefits better. Thank you for that.

20 VICE CHAIR GUNDA: Thank you, Commissioner
21 Gallardo.

22 Commissioner Monahan, would you like to move the
23 item?

24 COMMISSIONER MONAHAN: I move this item.

25 VICE CHAIR GUNDA: Commissioner Gallardo, would

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1 you second?

2 COMMISSIONER GALLARDO: I second.

3 VICE CHAIR GUNDA: Let's take the vote.

4 Commissioner Monahan?

5 COMMISSIONER MONAHAN: Aye.

6 VICE CHAIR GUNDA: Commissioner Gallardo.

7 COMMISSIONER GALLARDO: Ayes.

8 VICE CHAIR GUNDA: And I vote aye as well. The
9 vote count is 3-0 and the motion passes.

10 Let's move to Item 15. Welcome, Michael.

11 MR. LAZANO: Good afternoon Vice Chair, and
12 Commissioners. My name is Michael Lozano and I work in the
13 Energy, Research and Development Division. Today, I am
14 presenting the last recommended award from the
15 Commercializing Industrial Decarbonization solicitation.
16 We call it the CID Project. Four awards were approved in
17 the September business meeting and this is the fifth and
18 final one. Next slide, please.

19 The purpose of this solicitation is to fund
20 technology development and demonstration projects of
21 promising pre-commercial technologies, to accelerate
22 industrial decarbonization, and increase overall energy
23 efficiency to reach statewide goals set forth in things
24 such as Senate Bill 32, SB 100, and SB 350.

25 Projects must fall within one of the following

1 project groups: Group 1: Low-Carbon, High-Temperature
2 Industrial Heating. Group 2: Energy Efficiency and
3 Decarbonization of Concrete Manufacturing. Or Group 3:
4 Energy Efficient Separation Processes. Next slide, please.
5 All right, one back please.

6 The projects resulting from this solicitation
7 will increase electricity, electrification and energy
8 efficiency, decrease use of fossil fuels, GHG emissions,
9 and energy costs and help meet California's decarbonization
10 goals for industry.

11 The industrial sector has significant potential
12 for improvements in energy and water efficiency, but is a
13 difficult sector to decarbonize. Each individual facility
14 has unique operational needs, has a mix of old and new
15 equipment, lacks easy access to actionable operation data
16 for decision-making, and lacks verified performance data
17 under real-world conditions for promising emerging
18 technologies.

19 The recommended research project under review
20 today is from Group 2 and will address energy efficiency
21 improvements to benefit the cement industry. Next slide,
22 please.

23 The recommended project is located in Alameda,
24 California, in an under-resourced neighborhood. Next
25 slide.

1 Twelve Benefit Corporation is developing a novel
2 and scalable electrochemical process to convert carbon
3 dioxide, CO₂, from cement production flue gas into building
4 blocks for chemicals. This process utilizes water,
5 renewable electricity, and CO₂ as inputs, and produces high
6 value intermediates as outputs.

7 The first target product for industrial-scale
8 deployment is carbon monoxide, which can serve as a low-
9 emission feedstock for calcium formate, which is a chemical
10 additive used to increase cement strength and reduce curing
11 time. Around 40 percent of all calcium formate produced
12 today is used in construction applications.

13 The photo shown is a small prototype, about 12
14 kilowatts, about the size of a dishwasher. Twelve built in
15 2019. This project will create a unit that could fit in a
16 standard shipping container, so a large upscale in size.

17 Our project goals are 5x cost reduction over
18 baseline while maintaining similar performance. Move the
19 technology from lab prototype to commercial scale by the
20 end of the project. And potential benefits can include use
21 of captured CO₂ from industrial flue gas, such as cement,
22 and create a value added product. Also we can improve
23 energy efficiency, which could reduce the cost of carbon
24 utilization and create a revenue stream for CO₂ products in
25 general. Next slide, please.

1 This slide provides an overview of the process
2 that shows the inputs of carbon dioxide from flue gas
3 combining with water and electricity going through an
4 electrolysis process to produce carbon monoxide. And the
5 conversion of carbon monoxide to produce calcium formate
6 which can be used by the cement industry. So the research
7 in question will be the first item in the process in this
8 flow chart. Next slide, please.

9 Staff recommends approval of this grant agreement
10 and adoption of staff's determination that this project is
11 exempt from CEQA. I'm available for any questions. This
12 concludes my presentation. Thank you for your time.

13 VICE CHAIR GUNDA: Thank you, Michael.

14 Let's move to public comment.

15

16 MS. BADIE: Thank you. This is Mona Badie, the
17 Public Advisor at the California Energy Commission. The
18 Commission welcomes public comment on Item 15. And if
19 you're in the room we ask you use the QR code. You can
20 also raise your hand.

21 I'm not seeing anyone in the room, so I'm going
22 to transition to Zoom. If you're joining us by Zoom, we
23 ask that you use the raise hand feature on your screen to
24 notify us you'd like to make a comment or press *9 if
25 you're joining us by phone to raise your hand to make a

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1 comment. Just giving that a moment.

2 And I'm not seeing any hands, back to you Vice
3 Chair.

4 VICE CHAIR GUNDA: Thank you, Mona.

5 Michael, just a couple of quick questions. If we
6 go back on your slide. So the CCUS capturing the carbon
7 dioxide from the waste stream in the electrolysis process,
8 do we have in a hydrogen that's captured or what happens to
9 the hydrogen there?

10 MR. LAZANO: Well, what we're doing is since it's
11 the CO2 process, or the cement process as you know, the
12 clinker process is a CO2 rich process. We produce
13 basically 2 kilograms of CO2 per unit of product, so it's a
14 good place to start. And what we're doing is we're
15 capturing CO2 and make carbon monoxide. To make it very
16 clear what we're doing is CO2 to carbon monoxide, which
17 could be used to make calcium formate. And you need a lot
18 of this carbon monoxide to make purified calcium formate.

19 So that's what we're doing. It only requires .1
20 kilograms of water per kilogram of carbon monoxide in the
21 process. It's relatively benign. You can use any source
22 of electricity to be, to tell you the truth. In this case
23 we're trying to see if there's a source of renewables you
24 can use off peak, in which case what you're doing is you're
25 making something that has a value added to it. Because

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1 right now, people will buy the calcium for me in the
2 process. So it's easier when you make environmentalism,
3 also good business. What's good for the environment is
4 also good business if that can make a profit. And it's a
5 lot easier to convince people to participate in projects
6 such as these. So that's what we're doing with it.

7 VICE CHAIR GUNDA: Got it. So but the
8 electrolysis is primarily used for oxygen there? I'm
9 guessing that's what it used for.

10 MR. LOZANO: Yeah, you need to knock off that
11 extra oxygen.

12 VICE CHAIR GUNDA: Thank you. Just one comment,
13 I think. I've just been traveling, and I really recognize
14 the opportunity with CCUS. And especially capturing the
15 point sources that are non-controversial to begin with, as
16 a part to decarbonize our industrial sector and other
17 pieces. So just thank you for this work. I'm looking
18 forward to supporting it.

19 COMMISSIONER MONAHAN: Yeah, just I also want to
20 thank you and the team. This is an area that Commissioner
21 McAllister and I have talked a lot about as leads for
22 industrial decarbonization, because the cement sector is
23 one. It's like a limited number of facilities in
24 California. They're 2 percent of the state's emission. If
25 you look at in terms of a source, they're in the industrial

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1 sector, the second largest after oil and gas. It's just
2 like an opportunity. And I think we have industrial
3 partners who are really interested in this, how do they
4 lead on decarbonization? And then it becomes part of our
5 challenge is how do we make sure that the economics work
6 for lower carbon cement to be used within the state to help
7 us with our decarbonization pathway. So this is a great
8 investment and I really strongly support it.

9 VICE CHAIR GUNDA: Great. And with that,
10 Commissioner Monahan, would you like to move the item?

11 COMMISSIONER MONAHAN: I move Item 15? Yeah, 15.

12 VICE CHAIR GUNDA: Good, yeah 15.

13 Commission Gallardo, second?

14 COMMISSIONER GALLARDO: I second.

15 VICE CHAIR GUNDA: Okay. With that let's take
16 the vote. Commissioner Monahan.

17 COMMISSIONER MONAHAN: Aye.

18 VICE CHAIR GUNDA: Commissioner Gallardo.

19 COMMISSIONER GALLARDO: Aye.

20 VICE CHAIR GUNDA: And I vote aye as well. The
21 vote count is 3-0 and the motion passes.

22 Let's move to Item 16. Welcome, Pilar to
23 present.

24 MS. MAGAÑA: Good afternoon, Chair, Vice-Chair
25 and Commissioners. My name Pilar Magaña with the Fuels and

1 Transportation Division. Staff is seeking approval for a
2 project with California Grinding, Inc. in Fresno, which is
3 being proposed for funding under grant funding opportunity
4 known as the "Ultra-Low-Carbon Fuel: Demonstration- and
5 Commercial-Scale Production Facilities Utilizing Forest
6 Biomass." Next slide, please.

7 Just for some context, this competitive grant
8 solicitation was released in February 2023 to combat the
9 increasing challenges of wildfires and feedstock barriers
10 for low carbon fuel production.

11 Projects resulting from this solicitation will
12 reduce greenhouse gas emissions, decrease air pollution,
13 prevent wildfires, and help achieve the state's climate
14 change and clean air goals.

15 The Notice of Proposed Awards was posted in June
16 2023. And two projects were selected for funding under
17 this solicitation amounting to a total of \$10 million.
18 Today I will be presenting for consideration the first of
19 these two projects. This project is with California
20 Grinding, Inc. or CGI. The second project will be
21 presented at a future Business Meeting. Next slide,
22 please.

23 Co-located at their existing waste processing
24 facility, CGI's ultimate goal is to build off of an
25 existing anaerobic digester to convert 50,000 tons of woody

1 biomass to produce renewable natural gas as a primary fuel
2 and renewable hydrogen as secondary fuel.

3 Historically, the processing of woody biomass has
4 proven to be challenging as a result of economic and
5 technological barriers. However ongoing advancements that
6 can be integrated into proven established technologies, can
7 help determine the most efficient methods for producing
8 woody biomass in a cost effective and duplicative manner at
9 the commercial scale.

10 Prior to commercial-scale facility construction,
11 CGI must first determine the most suitable fuel conversion
12 technology. This project will focus on completing
13 technical, economic and environmental analyses of three
14 different technologies capable of efficiently processing
15 this woody biomass.

16 CGI's long-term goal is to build out this fuel
17 production facility once the analysis has been completed.
18 The analyses resulting from this project will help
19 determine if an installation will be considered in the
20 future. Next slide, please.

21 Staff is seeking your approval for this agreement
22 as well as adoption of staff's findings that this project
23 is exempt from CEQA.

24 We have Dennis and David Balakian from CGI and
25 Michael Brown from MDB Consulting Engineers in attendance

1 via Zoom who are happy to answer any questions.

2 This concludes my presentation, and I am happy to
3 answer any questions you may have.

4 VICE CHAIR GUNDA: Thank you, Pilar.

5 Let's go to public comment.

6 MS. BADIE: Thank you. This is Mona Badie, the
7 Public Advisor for the California Energy Commission. The
8 Energy Commission welcomes public comment on Item 16. If
9 you're in the room with us, we ask that you use the QR
10 code. You can also raise your hand.

11 And I'm not seeing anyone in the room, so I'm
12 going to transition to Zoom. If you're joining us by Zoom
13 and you'd like to comment, please use the raise hand
14 feature on your screen or *9 if you're joining us by phone.

15 And I'm not seeing any hands raised, so back to
16 you, Vice Chair.

17 VICE CHAIR GUNDA: Great. Do we have any
18 comments from the dais? Commissioner Monahan.

19 COMMISSIONER MONAHAN: Well, I'm wondering do we
20 have California Grinding on the phone? Are they, Pilar, do
21 you know if they're there?

22 MS. MAGAÑA: They said they were going to.

23 MS. BADIE: So I have a Michael Brown who has
24 just raised their hand.

25 COMMISSIONER MONAHAN: I wonder if Michael could

1 just talk with us just really briefly about what he views
2 as kind of the opportunity in this space to use woody
3 biomass to produce transportation fuels.

4 MS. BADIE: Great. Michael, I've opened your
5 line if you can unmute on your end.

6 MR. BROWN: Hi, this is Michael. Can you hear me
7 okay?

8 MS. BADIE: We can hear you, Michael.

9 MR. BROWN: Okay. Yes, thank you. I'm Michael
10 Brown, M-I-C-H-A-E-L B-R-O-W-N and I am the Program Manager
11 for California Grinding in the development of this project.
12 And I wanted to address specifically your question. This
13 application builds on two previous CEC grants that you made
14 for the development of our facility in Fresno, which takes
15 in biomass of all types and converts it in primarily into
16 methane, renewable natural gas.

17 When we decided to propose for this particular
18 opportunity, it was because we were very interested in
19 utilizing forest waste. Our basic facility utilizes
20 primarily green waste from the City of Fresno and
21 agricultural waste from the California Grinding operations.
22 This would allow us to add forest waste, forest biomass as
23 well.

24 The opportunity here is a really fantastic one in
25 that the campus itself, a 20-acre campus, is already fully

1 permitted. It has been accepting biomass and converting it
2 into fuel and other things for over 20 years. And with
3 your support from your previous grants and a USDA \$100
4 million loan guarantee we are building next year an
5 anaerobic digestion facility that will take care of all of
6 the wetter materials. What we don't have and need
7 desperately is a system that will take the drier material
8 like forest waste, orchard waste, and convert it into
9 something useful.

10 And we were able to team up with USC in testing
11 some very novel technology, which you are also supporting
12 at a site in Phelan and bring that together with what we're
13 doing. And we already have a pipeline interconnection with
14 PG&E approved. We have an electrical interconnection with
15 PG&E approved, so we are ready to go.

16 The idea of this initial step is to test three
17 different pathways, which probably would take more time to
18 explain at this point since I know you're late in your
19 agenda, but I'm happy to do that if you'd like to. To see
20 which is the best way. Our favorite of the three is
21 working with USC extracting hydrogen from gasified forest
22 waste. And taking the remainder of the gas after the
23 hydrogen has been removed and pumping it into our planned
24 anaerobic digester, because the research shows that that
25 will -- that that hydrogen and a carbon rich atmosphere

1 will increase the output of the anaerobic digestion system
2 as well.

3 So it's really double benefit. We get more
4 renewable natural gas. We get a higher concentrated
5 biogas, higher methane concentration. And we'll get
6 hydrogen as well. We'll do it on a small scale and on site
7 with this first phase of the grant. Then we'll put it,
8 tack it on to our full facility, commercial scale facility.
9 It's scheduled to do 1.3 million gallons of RNG. And tack
10 on what we learned from this step with you in our full
11 commercial scale next year.

12 COMMISSIONER MONAHAN: Great. Well, Michael,
13 thank you for just coming up off the cuff to answer my
14 question.

15 And Pilar, thank you to you and your team on
16 this. We're really trying to look for opportunities to
17 help the state clean up our transportation fuels, but also
18 address wildfire issues. And the need to ensure that we
19 have a more resilient system with less, you know, forest
20 materials that need to be removed for the sake of
21 wildfires. To be able to use them for transportation fuels
22 is a great opportunity to explore. So that's all I have to
23 say.

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

1 Commissioner Gallardo?

2 COMMISSIONER GALLARDO: Just real quick, Pillar,
3 I had mentioned to you offline - well suggested to you that
4 you check in with the Disadvantaged Communities Advisory
5 Group given their interest in biomass right now. So I just
6 wanted to state that for the benefit of the public and for
7 our Public Advisor as well, who supports that group.

8 MS. MAGAÑA: Yeah. And we have reached out to
9 them. And they are interested to hear about it at an
10 upcoming meeting, but they're also looking forward to
11 hearing in more detail once they complete the analysis what
12 will be next. So we're going to keep them in the loop.

13 COMMISSIONER GALLARDO: Wonderful. Thank you for
14 that update too, it's good to hear. Appreciate you being
15 so proactive.

16 VICE CHAIR GUNDA: And thank you, Pilar. I'm
17 just really looking forward to kind of following the course
18 of this given that we are in the middle of this multi-
19 sectorial energy transition. You know, we have the clean
20 grid. We're working on natural gas transition, but also
21 the petroleum. I think it almost feels like the natural
22 gas transition is going to be the hardest. So we're really
23 looking forward to understanding the results and the
24 opportunities here.

25 So with that, I would support it. And looking

1 forward if somebody moves the item.

2 COMMISSIONER MONAHAN: I move Item 16.

3 COMMISSIONER GALLARDO: I second.

4 VICE CHAIR GUNDA: We'll take the vote now.

5 Commissioner Monahan.

6 COMMISSIONER MONAHAN: Aye.

7 VICE CHAIR GUNDA: Commissioner Gallardo.

8 COMMISSIONER GALLARDO: Aye.

9 VICE CHAIR GUNDA: And I vote aye as well. The
10 vote count is 3-0 and the motion passes.

11 Let's move to item 17.

12 MR. GOMEZ: Got it.

13 VICE CHAIR GUNDA: Antonio, thank you.

14 MR. GOMEZ: Good afternoon, Vice Chair and
15 Commissioners. My name is Antonio Gomez. I'm a Mechanical
16 Engineer in the Transportation Unit within the Energy
17 Research and Development Division. Today, I am presenting
18 two recommended awards from the solicitation "Innovative
19 Hydrogen Refueling Solutions for Heavy Transport." Next
20 slide, please.

21 This solicitation was a collaboration between the
22 Gas Research and Development Program and the Clean
23 Transportation Program. It sought proposals to develop and
24 demonstrate innovative hydrogen refueling solutions to
25 support the decarbonization of emerging medium- and heavy-

1 duty on-road and off-road transportation applications. The
2 solicitation consisted of three groups. Today I will
3 present the projects from Group 2, Emerging Off-Road
4 Applications. There are two proposed awards in this group
5 totaling \$8.5 million of Energy Commission funding and
6 leveraging \$3.3 million in match. Next slide, please.

7 The proposed awards will benefit Californians by
8 providing advancements in hydrogen refueling that will
9 enable the adoption of liquid hydrogen fueled heavy
10 equipment across multiple industries. These projects will
11 reduce the cost of liquid hydrogen refueling by developing
12 mobile platforms that require no permanent construction or
13 installation. They will also primarily focus on marine and
14 aviation applications, which are difficult to electrify due
15 to their high power requirements and demanding duty cycles.

16 In California, aviation and commercial harbor
17 crafts, alone account for approximately 6 percent of the
18 NOx and 15 percent of the fine particulate matter emitted
19 by the entire transportation sector. These projects will
20 help mitigate this by facilitating the transition to zero
21 emission technologies in ports and airports, which will
22 reduce the harmful criteria pollutants and noise pollution
23 that disproportionately impact the adjacent disadvantaged
24 communities.

25 Both projects will also improve the refueling

1 performance by increasing efficiency and reducing fueling
2 time. These changes will bring the infrastructure to a
3 level where it is a viable replacement for internal
4 combustion engine technologies and can move California
5 closer to achieving its climate goals. Next slide, please.

6 In the first project, Zero Emission Industries
7 will develop a Cryogenic Hydrogen Infrastructure
8 Replacement Product or CHIRP that will be capable of
9 providing liquid hydrogen fuel to marine vessels and other
10 heavy-duty fuel cell power systems. Existing bunkering
11 technology for liquid hydrogen fueled marine vessels is
12 limited and not currently cost effective. Fixed
13 infrastructure is too costly to justify the switch to
14 hydrogen in most use cases, and the use of dedicated berth
15 space for a hydrogen fueling facility is often not feasible
16 due to the scarcity of such space in our ports.

17 Zero Emission Industries will develop a liquid
18 hydrogen bunkering solution capable of supplying fuel at a
19 rate of 35 kg/min at roughly 10 percent of the cost
20 required to build fixed liquid hydrogen refueling
21 infrastructure. The system will be housed in a standard
22 ISO container to allow for quick deployment and removal and
23 will implement a zero-boil-off system to capture boil-off
24 hydrogen gas and use it to power the refueling system.
25 This reduces the amount of vented hydrogen which benefits

1 the environment and eases the burden of permitting.

2 Once constructed, the refueler will be
3 demonstrated in one of California's ports, in a manner
4 similar to what can be seen on the bottom of this slide.
5 This project will enable the technology advancement and
6 testing required to demonstrate the feasibility of liquid
7 hydrogen bunkering for commercial harbor craft and will
8 facilitate the adoption of liquid hydrogen fueled heavy
9 equipment in other transportation sectors. Next slide,
10 please.

11 In the second proposed project, ZeroAvia will
12 develop and demonstrate a mobile liquid hydrogen storage
13 and dispensing system that will be mounted on a Class 6
14 truck and will serve to refuel its first liquid hydrogen
15 fueled aircraft, the ZA2000. Both of which can be seen on
16 the top right of the slide.

17 There is currently no integrated, cost-effective,
18 and mobile way of storing and dispensing liquid hydrogen
19 for refueling purposes. This severely hinders the adoption
20 of liquid hydrogen as a fuel source. And as you can see
21 from ZeroAvia's product timeline at the bottom of the
22 slide, their business requires a dependable liquid hydrogen
23 fueling solution by 2027 when the ZA2000 is scheduled to
24 enter into service.

25 ZeroAvia will address these problems by creating

1 a first-of-its-kind mobile liquid hydrogen refueling
2 product that will meet airside and Department of
3 Transportation certification standards, allowing it to move
4 safely within an airport, public roads, or anywhere
5 equipment needs to be refueled. It will also implement
6 high fuel flow rates to closely match the conventional
7 aircraft refueling experience, a zero-boil-off system to
8 power the refueler and reduce climate impacts of vented
9 hydrogen gas, and an automated control system to improve
10 safety and ease of use.

11 Once built, the refueler will be demonstrated at
12 the Mojave Air and Space Port in Kern County. And the
13 technologies developed through this project will allow
14 ZeroAvia to begin decarbonizing air travel. And could
15 assist in the decarbonization of marine, rail, port cargo
16 handling equipment, and heavy-duty trucks and busses. Next
17 slide, please.

18 Staff recommends approval of these grant awards
19 and adoption of staff's determination that these projects
20 are exempt from CEQA. That concludes my presentation. I'm
21 available for any questions. Thank you.

22 VICE CHAIR GUNDA: Thank you so much.

23 Let's move to public comment.

24 MS. BADIE: Thank you. This is Mona Badie, the
25 Public Advisor. The Commission welcomes public comment on

1 Item 17 at this time. If you are in the room we ask that
2 you use the QR code to notify us. And if you're on Zoom,
3 please use the raise hand feature on your screen to notify
4 us or press *9 if you're joining by phone to let us know
5 you'd like to comment on this item.

6 And we do not have anyone in the room so I'm
7 going to transition to Zoom. We have Ricky Elder. Ricky,
8 I'm going to open your line. Please spell your name for
9 the record, announce any affiliations. We're asking for
10 comments to be two minutes or less.

11 MR. ELDER: Good afternoon, Commissioners. My
12 name is Ricky Elder, spelled R-I-C-K-Y E-L-D-E-R. I'm
13 calling on behalf of Zero Emission Industries, a team
14 committed to developing technological innovations leading
15 to a future of clean safe, accessible hydrogen across the
16 globe.

17 As a brief review, our project CHIRP, which
18 stands for Cryogenic Hydrogen Infrastructure Replacement
19 Product, is a mobile liquid hydrogen refueling solution,
20 which will provide a clean energy adoption pathway to the
21 adversely of polluting and hard to decarbonize heavy duty
22 markets. ZEI is especially excited to utilize CHIRP for
23 enabling liquid hydrogen in the port ecosystem, which is a
24 significant contributor of pollutants in our state's
25 disadvantaged communities.

1 With the recent selection of California as one of
2 the seven awardees for the US Department of Energy's
3 Regional Clean Hydrogen Hubs Program, the need for more
4 hydrogen enabling solutions like CHIRP is clear. To date
5 CHIRP has secured over \$1.75 million and externally
6 contributed match and in-kind match funds, as well as
7 received significant interest and support across the
8 commercial market.

9 Zero Emission Industries is honored to be
10 nominated for this award, which will enable the development
11 of novel technology we hope to utilize in making hydrogen
12 accessible for all.

13 I would like to complete my comment by saying
14 thank you to the CEC for providing a platform for enabling
15 zero emission technology innovation.

16 I'd like to thank Antonio Gomez for his constant
17 communication and support throughout this process. Thank
18 you to our project partners Crowley, SoCalGas and South
19 Coast Air Quality Management District.

20 And I would like to thank the Commissioners for
21 their time today in helping craft the future of hydrogen
22 technology in California, and ultimately, our planet.
23 Thank you.

24 MS. BADIE: Thank you.

25 That is all the raised hands. Back to you, Vice

1 Chair.

2 VICE CHAIR GUNDA: Thank you. Mona, thank you.
3 Antonio, that was really a great presentation.

4 I had just one comment, and maybe a question. So
5 the comment again, as was just noted by Ricky -- and just a
6 big congratulations to California on the 1.2 billion DOE
7 grant and really looking forward to the evolution of the
8 green hydrogen economy in California. But specifically on
9 this particular project there seems to be, in some of the
10 recent learnings I've had, that some of the shipping
11 industry is really moving to E-methanol, and potentially
12 kind of ammonia as a kind of pathway forward. And there
13 has been large investment by Maersk and other shipping
14 industry. That's one.

15 And then on the aviation side, there's also been
16 kind of discussions at the European Union level that they
17 would like to start infusing, right so like E-fuels into
18 it. And I haven't heard hydrogen as much in Europe
19 directly. I mean, again definitely hydrogen production is
20 an important element, but then the actual form was either
21 methane, E-methane, or E-methanol.

22 Now, given that this is a global market, given
23 that these are a global transportation, do we have an idea
24 on how it's going to evolve here? Is it I mean, are we
25 going to really move towards liquid hydrogen or just going

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1 to continue to evolve into some other form?

2 COMMISSIONER MONAHAN: So I can take some of
3 that, and then Antonio can embellish. But I think there is
4 hydrogen definitely being used in like ferries in Norway.
5 I went, when I was in Norway, I got to see hydrogen being
6 used in a ferry. And they are looking at I mean, ammonia
7 is basically a carrier of hydrogen. So they're looking at
8 different ways to -- I mean I think with shorter distance
9 travel hydrogen probably is fine. On longer when you're
10 going across the Pacific, you're going to probably want a
11 hydrogen -- not be able to store the hydrogen, so ammonia
12 is a better carrier.

13 But I would say hydrogen is definitely in the mix
14 when it comes to marine decarbonization.

15 MR. GOMEZ: Yeah, I agree. I think similar to
16 the question of Bev (phonetic) versus fuel cell, I think it
17 depends on the use case. And like Commissioner Monahan
18 said, it depends on the precise application. But I do
19 believe that it is a solid path forward.

20 VICE CHAIR GUNDA: Thank you. Any other
21 questions or comments?

22 COMMISSIONER GALLARDO: Well, just -

23 COMMISSIONER MONAHAN: Oh, you go.

24 COMMISSIONER GALLARDO: No, you go.

25 COMMISSIONER MONAHAN: No, you go.

1 COMMISSIONER GALLARDO: I'll be quick. So,
2 Antonio, great presentation. I'm really excited about
3 this, particularly of the marine and aviation focus. I was
4 just curious on the CHIRP project, in particular, I think
5 you said that a site hasn't been selected yet. I was just
6 curious what will go into selecting that? Or will that be
7 the Applicant who will select that site?

8 MR. GOMEZ: I think if Ricky's still online, he
9 might be able to comment on that.

10 MS. BADIE: So if you -- if someone from that
11 grantee would like to speak just use the raise hand feature
12 on Zoom, and I will open your line. Ricky, I see a raised
13 hand. I'm going to open your line right now.

14 MR. ELDER: Hi, everyone. Thanks Commissioner
15 Gallardo, for the question. Our final demonstration
16 location has not been selected yet. Although our
17 demonstration partners have locations in Port of Los
18 Angeles, which is a potential location for a demonstration.
19 But we are still looking and determining where our
20 demonstration will be most useful in showing off the
21 capabilities of liquid hydrogen. Thank you.

22 COMMISSIONER GALLARDO: Okay, thank you. That
23 could be a fun site visit, so let us know once you decide.

24 MR. ELDER: Absolutely. We'd love to have you.

25 VICE CHAIR GUNDA: Thank you, Commissioner

1 Gallardo.

2 Commissioner Monahan?

3 COMMISSIONER MONAHAN: Well, just I wanted to
4 highlight that the innovative nature of this, which you
5 know with light-duty refueling it's something like 1
6 kilogram per minute. And even this is twice as fast I
7 think Peter said then what NREL is studying in terms of
8 heavy-duty delivery. So it could be really important in
9 terms of fast refueling, to be able to test these
10 technologies.

11 And as you said, Commissioner Gallardo, these are
12 great applications. And they dovetail really sweetly with
13 the hydrogen hub that the ARCHES winning the federal money
14 for a hub. So just really great projects.

15 MR. GOMEZ: Thank you.

16 VICE CHAIR GUNDA: Awesome. Thank you so much.
17 Commissioner, would you like to move?

18 COMMISSIONER MONAHAN: I move Item 17.

19 COMMISSIONER GALLARDO: I second.

20 VICE CHAIR GUNDA: I think it's Item 18.

21 COMMISSIONER MONAHAN: I move Item 18.

22 MS. BADIE: Sorry, this item is 17.

23 COMMISSIONER MONAHAN: It's 17, sorry.

24 COMMISSIONER MONAHAN: I move Item 17.

25 COMMISSIONER GALLARDO: I second.

1 VICE CHAIR GUNDA: We'll take the vote now.
2 Commissioner Monahan.

3 COMMISSIONER MONAHAN: Aye.

4 VICE CHAIR GUNDA: Commissioner Gallardo.

5 COMMISSIONER GALLARDO: Aye.

6 VICE CHAIR GUNDA: I vote aye as well. The vote
7 count is 3 to 0. The motion passes.

8 Let's move to Item 18 now. Is there any public
9 comment for Item 18?

10 MS. BADIE: Thank you. This is Mona Badie, the
11 Energy Commission's Public Advisor. The Commission
12 welcomes public comment on Item 18. And first we'll just
13 look in the room real quick. I'm not seeing anyone and now
14 we'll transition to Zoom.

15 If you'd like to comment, please use the raise
16 hand feature on your screen or *9 if you're joining us by
17 phone.

18 I'm not seeing any raised hands for this item.
19 Back to you, Vice Chair.

20 VICE CHAIR GUNDA: Thank you, Mona.

21 Commissioner Gallardo, would you like to move the
22 item please?

23 COMMISSIONER GALLARDO: I move Item 18 for
24 approval.

25 COMMISSIONER MONAHAN: I second.

1 VICE CHAIR GUNDA: We'll take the vote now.
2 Commissioner Gallardo.

3 COMMISSIONER GALLARDO: Aye.

4 VICE CHAIR GUNDA: Commissioner Monahan.

5 COMMISSIONER MONAHAN: Aye.

6 VICE CHAIR GUNDA: I vote aye as well. The vote
7 count is 3 to 0. The motion passes.

8 We are going to skip Item 19, the Commission
9 reports, for the next meeting. Let's go to Item 20,
10 Executive Director's Report.

11 MR. BOHAN: Thank you Chair, Vice Chair and
12 Commissioners, no report this afternoon.

13 VICE CHAIR GUNDA: Thank you, Director Bohan.
14 Moving to the next one, Item 21, Public Advisor's
15 Report.

16 MS. BADIE: No report. Thank you.

17 VICE CHAIR GUNDA: Thank you, Mona.
18 Moving to Chief Counsel's Report, Item 22.

19 MS. BARRERA: Good afternoon. No report.

20 VICE CHAIR GUNDA: Great. Thank you and
21 adjourned.

22 (The Business Meeting adjourned at 4:09 p.m.)

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I do hereby certify that the testimony in the foregoing hearing was taken at the time and place therein stated; that the testimony of said witnesses were reported by me, a certified electronic court reporter and a disinterested person, and was under my supervision thereafter transcribed into typewriting.

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IN WITNESS WHEREOF, I have hereunto set my hand this 30th day of October, 2023.



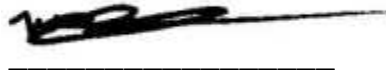
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