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CALIFORNIA ENERGY COMMISSION

In the matter of:

Business Meeting )  
 ) Docket No. 24-BUSMTG-01  
 )  
\_\_\_\_\_ )

BUSINESS MEETING

CALIFORNIA NATURAL RESOURCES AGENCY BUILDING  
FIRST FLOOR AUDITORIUM  
715 P STREET  
SACRAMENTO, CALIFORNIA 95814

IN-PERSON AND VIA VIDEO AND TELECONFERENCE

WEDNESDAY, FEBRUARY 14, 2024

10:00 A.M.

Reported by:

Martha Nelson

APPEARANCESBOARD

David Hochschild, Chair

Siva Gunda, Vice Chair

Andrew McAllister, Commissioner

Patricia Monahan, Commissioner

Noemi Gallardo, Commissioner

STAFF

Drew Bohan, Executive Director

Lisa DeCarlo, Acting Chief Counsel

Chad Oliver, Attorney

Heather Raitt, Director, Integrated Energy Policy Report

Ben Wender, Advisor to Commissioner Monahan

Jason Orta, Lead Natural Gas System Hydraulic Modeler

Jeremy Smith, Deputy Director, Energy Assessments Division

Tai Milder, Director, Division of Petroleum Market  
Oversight

Nick Fugate, Energy Assessments Division

Erik Stokes, Chief of Staff, Office of Commissioner  
Gallardo

Armando Ramirez, Efficiency Division, Standards Appliance  
Branch

APPEARANCES

STAFF (cont'd.)

Sara Sanders, Energy Analyst, Fuels and Transportation  
Division

Marc Perry, Energy Commission Specialist I, Fuels and  
Transportation Division

Ben De Alba, NEVI Lead, Fuels and Transportation Division

Pilar Magaña, Fuels and Transportation Division

Benjamin Tuggy, Investment Plan Update Project Manager,  
Fuels and Transportation Division

Adam Davis, Air Pollution Specialist, Fuels and  
Transportation Division

Mike Gravely, Energy Storage Technical Lead, Military  
Advisory to Chair Hochschild

Ayat Osman, Energy Research and Development Division

PUBLIC ADVISOR

Mona Badie

Dorothy Murimi

ALSO PRESENT

Alice Reynolds, President, CPUC

Elliot Mainzer, President, CAISO

Leuwam Tesfai, Deputy Executive Director for Energy and  
Climate Policy, CPUC

Cristy Sanada, CAISO

APPEARANCES

ALSO PRESENT (cont'd.)

Jimmy O'Dea, Caltrans

John Zhuang, BYD RIDE

Bill Magavern, Coalition for Clean Air

Adrian Martinez, Disadvantaged Communities Advisory Group

PUBLIC COMMENT

Bruce Severance

Steve Uhler

Patrick Dexter, United Auto Workers

Tanya DeRivi, Western States Petroleum Association

Sophie Ellinghouse, Western States Petroleum Association

Jeremy Smith, State Building and Construction Trades  
Council of California

Sarah Arveson, UAW Local 5810

Cristina Marquez, IBEW Local 569

Sean Ellis, United Association of Plumbers and  
Pipefitters

Theo Figurasin, Jobs to Move America

Adam Jorge, Southern California Gas Company

Katrina Fritz, President and CEO, California Hydrogen  
Business Council

Sarah Taheri, San Diego Gas and Electric

Dawn Anaiscourt, Southern California Edison

APPEARANCES

PUBLIC COMMENT (cont'd.)

Shelby Gatlin, CalCERTS

Martin Barrera, Jobs to Move America

Subarna Bhattacharyya, Co-Founder and CEO, Climformatics

Joy Larson, New Energy Nexus

David Manosalvas-Kjono, Co-Founder and CEO, Aeromutable

Rebecca Peredo, Community Energy Labs

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P R O C E E D I N G S

10:02 a.m.

WEDNESDAY, FEBRUARY 14, 2024

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

CHAIR HOCHSCHILD: Good morning, friends. I'm  
David Hochschild, Chair of the California Energy  
Commission. Happy Valentine's Day. I think we can all  
agree there's nothing more romantic than a day-long meeting  
of the California Energy Commission.

So I call this meeting to order. Today is  
Wednesday, February 14th. Joining me are Vice Chair Gunda,  
Commissioner McAllister, Commissioner Monahan, and  
Commissioner Gallardo. We have a quorum.

Let's stand for the Pledge of Allegiance.

(Whereupon the Pledge of Allegiance is recited.)

CHAIR HOCHSCHILD: Thank you.

We'll begin with public comment and then move on  
to agency announcements.

Public Advisor?

MS. BADIE: Good morning. This is Mona Badie,  
the Public Advisor for the California Energy Commission.

The Energy Commission now welcomes public comment  
on any item on the agenda, including non-voting or  
informational items.

1           There will also be dedicated public comment  
2 periods for each voting item on the agenda And we're going  
3 to take hands in three different ways. If you're in the  
4 room, we're asking folks to use the QR code that is posted  
5 in the back of the room or visit the Public Advisor table  
6 for assistance. And if you're joining us by Zoom, please  
7 use the raise hand feature on your screen. It looks like  
8 an open palm. And if you're joining by phone, we ask that  
9 you use press star nine to raise your hand by phone.

10           So first we will check for folks in the room.  
11 And we have Bruce Severance.

12           Bruce, if you could please approach the podium?  
13 Please spell your name for the record. And we're asking  
14 for comments to be two minutes or less. There will be a  
15 timer on the screen. Thank you.

16           MR. SEVERANCE: Bruce Severance,  
17 S-E-V-E-R-A-N-C-E. I am a member of the Diablo Canyon  
18 Decommissioning Engagement Panel, although I am here today  
19 speaking individually.

20           I'm also an energy analyst and a regulatory  
21 compliance engineer. I've co-authored papers with Dr.  
22 McDonald of UC Berkeley regarding the embrittlement of  
23 Diablo Canyon Unit 1. And I am not anti-nuclear. I do not  
24 work for or with anti-nuclear groups. And I support the  
25 extension of Unit 2 for ten years, if we could just shut

1 down Unit 1, as I feel that it is very clear that there is  
2 evidence of severe embrittlement, and I believe that's  
3 being denied.

4 Key points of a 48-page report, which I have  
5 brought with me to hand-deliver to you after the meeting  
6 today, are that there are, according to the regulation, two  
7 sets of credible data required for each severely embrittled  
8 or embrittled material that has to be monitored within the  
9 center of the reactor called the beltline region. And by  
10 PG&E's own reporting in their Appendix D of the Capsule D  
11 (phonetic) report published in 2003, Appendix D, page D-5,  
12 I've got a screenshot of it in my report, it shows very  
13 clearly that their own table shows they have two sets of  
14 credible data for each limiting material in the RPV. They  
15 have used a technicality to eliminate one set and said,  
16 well, we don't have two sets, so we can't use any of the  
17 data, any of the pre-2004 data.

18 And what they've done is they've thrown out three  
19 decades of testing data in order to adopt calculational  
20 methods only. Some of that is integrated through an  
21 extrapolation process, which is also questionable. And the  
22 report makes clear that the basis upon which they did that  
23 was incorrect, and it's not according to regulation.

24 The other key point, and there are 14 of these in  
25 the report, I'm only hitting two, and it's all written in

1 plain English, not in physics terms, and I had some  
2 assistance from Dr. McDonald to really break that down  
3 correctly so that decision makers can understand this  
4 report very clearly, the second key thing is that the  
5 Westinghouse report that they rely on to evaluate the  
6 pressurized thermal shock possibilities, which is a  
7 condition where cold water is introduced and the pressure  
8 drops very quickly in the reactor, replacement water is put  
9 in, which is at a much colder temperature, and pressure  
10 goes back up again. And this is like the design case that  
11 the reactor has been designed for.

12 Well, there are monitoring and stress testing  
13 requirements that would prevent that type of accident from  
14 happening because there is no backup system for the reactor  
15 vessel itself.

16 CHAIR HOCHSCHILD: Thank you. I'm going to have  
17 to ask you to stop there.

18 MR. SEVERANCE: Yeah.

19 CHAIR HOCHSCHILD: We're over time. But as we  
20 talked about, if you can follow up with our nuclear  
21 advisor, Justin Cochran, that would be great. Obviously,  
22 anything having to do with nuclear safety of Diablo Canyon  
23 is a very, very important issue --

24 MR. SEVERANCE: Okay.

25 CHAIR HOCHSCHILD: -- so thank you for coming.

1 MR. SEVERANCE: Yeah. Five seconds.

2 The report responds directly to the Kirk Report  
3 that was just published on February 1st. And I go item by  
4 item --

5 CHAIR HOCHSCHILD: Thank you.

6 MR. SEVERANCE: -- down the list --

7 CHAIR HOCHSCHILD: Yeah.

8 MR. SEVERANCE: -- and respond to that report in  
9 full.

10 CHAIR HOCHSCHILD: Thank you so much. Thanks for  
11 being here.

12 MS. BADIE: Thank you.

13 And we will now transition to our Zoom  
14 commenters. Phone number ending in 385, I'm going to open  
15 your line. If you could press star six to unmute, please  
16 state and spell your name for the record, announce any  
17 affiliation. We're asking for comments to be two minutes  
18 or less.

19 MR. UHLER: Good morning, Commissioners. I am  
20 Steve Uhler, U-H-L-E-R. I direct my comment today to the  
21 Chair and Director of the Energy Commission.

22 The prior chair considered themselves head of the  
23 agency. Thank you for ensuring the public's right to  
24 inspect public records. At the last business meeting, I  
25 reminded agency staff that I had requested public records

1 for RPS. The agency staff responded to my request.  
2 Unfortunately, they have only provided a list of unbundled  
3 renewable energy credits. This is not responsive to my  
4 request. A WREGIS renewable energy credit is unbundled by  
5 definition and only represents ten percent of RPS claims.  
6 eTags are required to represent the other 90 percent.  
7 Please see that my records request is fulfilled.

8           A month ago, I provided the staff with analysis  
9 of a power plant eligible for RPS. I compared the output  
10 the staff reported for compliance verification with QFER  
11 and EIA data. The results are over claims of three or more  
12 times what QFER EIA data indicate.

13           The staff's method of verification requires an  
14 explanation if they exceed five percent. Please see that  
15 that explanation is made available to the public. Perhaps  
16 you should make the explanation subject of a future agenda  
17 item where action is taken, and perhaps you officially  
18 overlooked delegating your authority to agency staff. Item  
19 four has a delegation, but it doesn't appear in the docket  
20 for item four. Please ensure that your official  
21 delegations are made available to the public, and please  
22 provide me a copy of each delegation.

23           Thank you.

24           MS. BADIE: Thank you for your comment.

25           That concludes public comment. Back to you,

1 Chair.

2 CHAIR HOCHSCHILD: Okay, we'll move on to agency  
3 announcements.

4 I want to begin just by taking a moment to  
5 recognize that February is Black History Month, and there  
6 are going to be a number of events this month, some of  
7 which have already happened around that theme.

8 I do want to just uplift two extraordinary  
9 African American winners from the California Hall of Fame  
10 ceremony, which I was really fortunate to be able to join  
11 last week.

12 One is my former boss, Mayor Willie Brown of San  
13 Francisco, who was the longest serving speaker of the  
14 Assembly in California history. And then went on to serve  
15 eight years as mayor of San Francisco, and he was  
16 recognized. And he's turning 90 this spring. All of us  
17 who worked for him joined for a big celebration of that.

18 And the other is Judge Thelton Henderson, who has  
19 had a long and distinguished career in the Ninth Circuit  
20 and is really a luminary in the legal field nationally.  
21 And I'm very blessed, he's going to be swearing me in on  
22 Friday at our ceremony.

23 So with that, let me just open it up to others.  
24 Any other comments or notes, starting with Commissioner  
25 Gallardo?

1           COMMISSIONER GALLARDO: Buenos dais. Good  
2 morning. So happy Valentine's Day, Feliz Dia del Amor y la  
3 Amistad.

4           I am going to utilize that theme to say that the  
5 Energy Commission expresses love and respect through its  
6 Clean Energy Hall of Fame Awards ceremony. And I wanted to  
7 announce that we are having that this year. The Hall of  
8 Fame Awards is an annual event we do. We're in our fifth  
9 year now, so it's our fifth year anniversary, and we're  
10 going to celebrate the awards December 5th so later this  
11 year.

12           And we are opening nominations already, so our  
13 web page, right on the home page you'll find a spot for you  
14 to be able to get information about how to nominate  
15 yourself or how to nominate others for this special award.  
16 It's a way for us to recognize local leaders throughout  
17 California who are contributing to getting us to a 100  
18 percent clean energy future. Also a way for them to  
19 express their love to Mother Earth as well, taking care of  
20 it. So I wanted to make that announcement.

21           Mona, real quick, did you have a slide to show  
22 just as a visual for Hall of Fame? No? Okay, that's all  
23 right.

24           So just a reminder to go to the webpage,  
25 energy.ca.gov. Right on the home page, you'll find



1 information about the Clean Energy Hall of Fame and  
2 specifically the nomination process. So that starts today  
3 and nominations close May 10th.

4 Thank you.

5 CHAIR HOCHSCHILD: Thank you.

6 Vice Chair?

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

8 So I just want to recognize Bruce Severance and  
9 his comments on the safety for Diablo Canyon. Thank you  
10 for taking the time to be here and sharing that with us.  
11 It's really important, as the Chair said, to think about  
12 the safety, the affordability, and the need for those  
13 electrons. So we take that very seriously, so thank you  
14 for taking the time.

15 I want to just recognize Jane Park in our office  
16 who is now, you know, our Chief of Staff. You know, she  
17 was playing as an interim role and now she's taking that  
18 role full time. So I don't think she's here, but thank you  
19 for putting up with that with me and trying to take that  
20 on.

21 I also never really took a chance to kind of  
22 uplift Qing Tian, who's here, who's joined from R&D into  
23 our office. And he's one of the advisors focusing on  
24 demand forecasting on all things demand side.

25 So thank you, Qing.

1           And finally, I don't want to repeat the  
2 Valentine's theme but, you know, it's great to be around  
3 people that we appreciate on a Valentine's Day.

4           But want to take a moment to, also, just  
5 congratulate the chair on his reappointment and, you know,  
6 kind of like you're swearing in ceremony coming up this  
7 Friday. I think we are culturally really as good as an  
8 organization as, you know, both the leadership and staff  
9 that show up every day. And thank you for leading, you  
10 know, with your heart and a vision and boldness that we  
11 really appreciate.

12           Thanks.

13           CHAIR HOCHSCHILD: Thank you so much. Will you  
14 be my Valentine?

15           Commissioner McAllister.

16           COMMISSIONER MCALLISTER: Yeah, the heart theme,  
17 it seems very appropriate. And yesterday was Mardi Gras,  
18 of course, so, you know, can't forget that. And definitely  
19 a lot of partying going on in Latin America, so that's  
20 good, especially in down in Brazil.

21           So I did want to just make a couple of  
22 announcements. So my former advisor, Catherine Kennett  
23 (phonetic), is now in Washington. Met with her last week  
24 when I happened to be out there. And she's working for the  
25 Congressional Research Service, doing some really cool

1 stuff, so really excited for her.

2 But that is a way to announce that I do have a  
3 job opening my office, so that's posted so, you know, when  
4 I encourage staff and, you know, outside folks exactly, as  
5 well. Typically, that's an inside staff. But really,  
6 great opportunity to really get some vision into, you know,  
7 our policy process, so just want to encourage people to  
8 apply.

9 And yeah, I guess that's it. Thanks.

10 CHAIR HOCHSCHILD: Thanks.

11 Commissioner Monahan?

12 COMMISSIONER MONAHAN: Well, I wasn't going to  
13 say anything, but I'm compelled to speak because all of you  
14 have said such wonderful things.

15 And I just want to acknowledge our newest  
16 Commissioner, Commissioner Gallardo, who very kindly got us  
17 all flowers. And I see flowers to some of the executive  
18 team, and I just want to acknowledge that this idea, that  
19 we're all working really hard. And I think we've faced  
20 some big challenges. I know personally, I have faced some  
21 big challenges in this job. And I know, you know, the  
22 Fuels and Transportation Team that I see the most closely,  
23 they're working so hard. And it's stressful to be in an  
24 implementation mode.

25 We face a lot of challenges. And I think this

1 idea of let's be kind to each other, let's be empathic to  
2 each other, to the public, to communities that are facing,  
3 I think a lot of challenges in terms of access to clean  
4 energy and a legacy of racism that really carries weight.  
5 And it just behooves all of us to be as empathic to each  
6 other and to the public that we serve.

7           And I feel that very strongly here at the dais  
8 that we were trying to lead with our hearts and our  
9 intellects, so just want to acknowledge that.

10           CHAIR HOCHSCHILD: Really well said.

11           And I just wanted to add my thanks to  
12 Commissioner Gallardo as well. One of the many reasons  
13 we're so grateful she's on the dais with us is her  
14 leadership on Lithium Valley. And there was a really,  
15 really tremendous piece in the Wall Street Journal, a video  
16 essay of the whole picture, both showing the opportunity to  
17 have enough lithium to supply 375 million vehicles that can  
18 be sustainably produced from the region, but also the need  
19 to do that in a way that uplifts the community and makes  
20 people's lives better.

21           And we're just so fortunate to have you  
22 quarterbacking that effort for the Energy Commission in the  
23 state, so thank you again.

24           Today, the Energy Commission is going to be  
25 seeking to approve over \$50 million of grants contributing

1 to California's economic recovery.

2 And if that is it for agency announcements, why  
3 don't we turn to item three, the consent calendar.

4 Is there any public comment on that?

5 MS. BADIE: Good morning, this is Mona Badie  
6 again, the Public Advisor for the Energy Commission. The  
7 Commission now welcomes public comment for item three.  
8 This is the consent portion of the agenda.

9 If you're joining us in the room, we're asking  
10 folks to use the QR code or visit the Public Advisor table  
11 on the back of the room. Dorothy Murimi is available to  
12 assist anyone with a QR code. And if you're joining by  
13 Zoom, please use the raise hand feature on your screen to  
14 let us know you'd like to make a comment and star nine if  
15 you're joining us by phone.

16 So I'll start with folks in the room. One  
17 moment. Okay, we don't have anyone in the room for item  
18 three, so I'm going to transition to Zoom. All right, I  
19 saw one raised hand, but that hand was lowered. And just  
20 give it a moment, is there anyone?

21 Okay, Patrick Dexter, I'm going to open your  
22 line. If you could please spell your name for the record.  
23 We do ask that comments be limited to two minutes or less.

24 MR. DEXTER: Hello. I would like to -- or sorry,  
25 my name is Patrick Dexter, P-A-T-R-I-C-K D-E-X-T-E-R. And

1 I am an international representative with the United Auto  
2 Workers Union. We represent nearly 100,000 active and  
3 retired members on the West Coast of California. And  
4 actually, I would like to apologize because I intended to  
5 comment on a different item, and so I will chime in a  
6 little bit later.

7 Thank you, everybody.

8 MS. BADIE: Thank you.

9 And that concludes public comment for item three.  
10 Back to you, Chair.

11 CHAIR HOCHSCHILD: Okay, so item 3-C is being  
12 pulled off the consent calendar and will now be taken up as  
13 item 17. And then it looks, as well, as like item F is  
14 removed. So I would welcome a motion on items A, B, D, E,  
15 and G from Commissioner Gallardo.

16 COMMISSIONER GALLARDO: I move to approve those  
17 items as stated.

18 CHAIR HOCHSCHILD: Is there a second?

19 COMMISSIONER MCALLISTER: Second.

20 CHAIR HOCHSCHILD: Second by Commissioner  
21 McAllister. All in favor say aye.

22 CHAIR HOCHSCHILD: Commissioner Gallardo?

23 COMMISSIONER GALLARDO: Aye.

24 CHAIR HOCHSCHILD: Commissioner McAllister?

25 COMMISSIONER MCALLISTER: Aye.

1 CHAIR HOCHSCHILD: Vice Chair Gunda?

2 VICE CHAIR GUNDA: Aye.

3 CHAIR HOCHSCHILD: Commissioner Monahan?

4 COMMISSIONER MONAHAN: Aye.

5 CHAIR HOCHSCHILD: And I vote aye, as well.

6 Those items pass unanimously.

7 We will turn now to item four, information item,  
8 Independent Consumer Fuels Advisory Committee.

9 Good morning, Chair, Vice Chair, and  
10 Commissioners.

11 MS. SMITH: My name is Jeremy Smith and I'm a  
12 Deputy Director in the Energy Assessments Division. I am  
13 presenting for your information the roles and  
14 responsibilities of the Independent Consumer Fuels Advisory  
15 Committee that will support CEC's work under Senate Bill  
16 X1-2.

17 Next slide, please.

18 In March 2023, Governor Gavin Newsom signed  
19 Senate Bill X1-2 to protect Californians from experiencing  
20 price gouging at the pump by oil companies. The law  
21 further benefits Californians by increasing transparency  
22 into the petroleum industry and market. The Independent  
23 Consumer Fuels Advisory Committee was established to  
24 provide expert advice and insight into these complex issues  
25 to support CEC and the Division of Petroleum Market

1 Oversight in implementing SB X1-2.

2           Next slide.

3           Under SB X1-2, the CEC is charged with several  
4 responsibilities, including collecting and reporting data  
5 on gross gasoline refining margins, assessing options to  
6 avoid future price spikes, and determining a maximum gross  
7 refining margin, and whether a penalty should be assessed  
8 for refiners that exceed it.

9           To help ensure the benefits to Californians  
10 outweigh the potential costs, SB X1-2 also establishes the  
11 Independent Consumer Fuels Advisory Committee, made up of  
12 industry experts appointed by the Governor and the  
13 Legislature to advise on technical market issues.

14           Next slide, please.

15           The Independent Consumer Fuels Advisory  
16 Committee, or ICFAC for short, fills a critical role in  
17 supporting CEC and DPMO with their responsibilities under  
18 SB X1-2. This committee of eight appointees representing  
19 academia, industry, consumers, labor, and environmental  
20 justice organizations will provide expert knowledge on  
21 existing and emerging petroleum market trends and factors  
22 that lead to price fluctuations, the impacts of sudden or  
23 significant price movements in petroleum fuels markets on  
24 consumers, market participants, and other stakeholders and  
25 other petroleum market issues.



1           The Committee will also advise on the  
2 establishment of a maximum gross gasoline refining margin  
3 and, if established, the appropriate penalty framework,  
4 enhancements for the transportation fuels assessment,  
5 approaches for the transportation fuels transition plan,  
6 and any market power dynamics that could be occurring in  
7 the California wholesale and retail gasoline markets.

8           Next slide, please.

9           The next steps are to finalize the appointments,  
10 gather input from Commissioners on the various topics they  
11 would like the Committee to explore, and to hold the first  
12 meeting within a month of finalizing the appointments.

13           That concludes my presentation. I am available  
14 to answer your questions. Thank you.

15           CHAIR HOCHSCHILD: Thank you.

16           All right, let's go to Commissioner discussion,  
17 starting with the Vice Chair.

18           VICE CHAIR GUNDA: Thank you, Chair.

19           Thank you, Jeremy, for the presentation. As you  
20 stated, I think the Independent Advisory Committee will  
21 have a pivotal role for our staff to really kind of gather  
22 input on various elements of the transition that we're  
23 talking about, whether it's consumer watchdog or the  
24 industry perspective and the perspective of the  
25 environmental justice communities.

1           So as, you know, we continue to look towards  
2 building that, you know, I think one of the things we need  
3 to make sure is really think through, how are we going to  
4 create the forum that allows for the maximization of their  
5 input into our processes? That's often and, you know, kind  
6 of at the start of critical decisions. And also just kind  
7 of making sure that the setup of the Committee really  
8 allows for a robust discussion that allows for policy  
9 recommendations to come and not necessarily kind of take,  
10 you know, just a polarizing, you know, point of view that  
11 doesn't allow, you know, staff to get input.

12           So I look forward, you know, to developing that  
13 process and charter that really kind of creates a process  
14 that benefits the CEC and, hence, benefits the public of  
15 California.

16           Can you just remind us, so there's total eight  
17 spots, and six are coming from the governor appointments.  
18 The other two have been already appointed?

19           MS. SMITH: Yes, that's right. There's two of  
20 the eight appointments have been filled. Those are both  
21 the legislature appointments. Anee Raval is the Speaker of  
22 Assembly appointee. She's the Senior Policy Researcher at  
23 the Asian Pacific Environmental Network. And the other is  
24 Antonio Sanchez. He's the Senate Committee on Rules  
25 appointee. He's the Political Director for the

1 International Brotherhood of Electrical Workers, Local 11.

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

3 So yeah, before I kind of, you know, pass it back  
4 to the chair, just want to say how incredibly grateful for  
5 the work that you, Aleecia, the Assessments Division at  
6 large, the executive office with Drew and his leadership,  
7 the comms, the legal, everybody's been on board over the  
8 last eight months, working your hearts out and making this  
9 happen.

10 I just want to recognize by the nature of the  
11 problem that we are dealing with, it's going to be very  
12 controversial, and it will be a point that will be -- that  
13 will have very passionate points of view. And I request,  
14 you know, just do what you're doing in terms of making sure  
15 the venue feels welcoming for everybody, nobody's surprised  
16 by what we are doing here, and there is an opportunity for  
17 everybody to weigh in with their perspective and create  
18 transparency that allows for trust.

19 So you guys are doing a wonderful job. I just  
20 want to continue to foster those as we move forward with  
21 this decision. Thank you.

22 CHAIR HOCHSCHILD: Yeah, well said. My thanks as  
23 well.

24 And my thanks to you, Vice Chair, for leading us  
25 through this very, very complex and thorny issue and for

1 seeking to protect the public from spikes, a very, very  
2 important and worthy use of our energy and resources here  
3 at the Energy Commission.

4 Let me just see if there's any other comments or  
5 questions. Yeah, Commissioner McAllister.

6 COMMISSIONER MCALLISTER: I just wanted to echo  
7 your thanks to Vice Chair Guinda for leadership there, and  
8 the governor's leadership, as well, just in sort of -- you  
9 know, this is -- a lot of money is at play here. And so  
10 it's important, the consumer protection angle and just sort  
11 of a really grounded analysis is hugely, hugely important.  
12 And the credibility of any direction or decisions we may  
13 take depend on that.

14 And so I just, I really have a lot of faith in  
15 the staff and just the team that we're building to, you  
16 know, keep track of all this and really navigate this  
17 complex terrain. So thanks to everyone.

18 CHAIR HOCHSCHILD: Don't go anywhere, Jeremy,  
19 because with that, we're going to turn to item five,  
20 emergency rulemaking adopting revised SB X1-2 spot market  
21 reporting requirements. And so back to you.

22 MS. SMITH: All right. Excellent. Thank you,  
23 Commissioners. Once again, I'm Jeremy Smith, Deputy  
24 Director of the Energy Assessments Division, and I'm now  
25 presenting for your consideration and approval the revised

1 spot market reporting requirements developed under the  
2 SB X1-2 emergency rulemaking.

3 Next slide.

4 As I stated earlier, SB X1-2 was enacted to  
5 protect Californians from gasoline price gouging. There  
6 are many implementation activities, but one of particular  
7 importance is the CEC was tasked with looking into the way  
8 the petroleum market operates and to look for market  
9 manipulation. Specifically, SB X1-2 mandates that market  
10 participants who trade on the spot market file daily  
11 reports with the CEC.

12 Under the emergency rulemaking, we have revised  
13 the reporting requirements to help industry participants  
14 better understand their obligations and provide greater  
15 transparency into the California transportation fuels spot  
16 market. This will allow CEC and the Division of Petroleum  
17 Market Oversight to better analyze market behavior and  
18 investigate anomalies.

19 Further, this additional spot market data  
20 collected through revised forms will provide the facts  
21 necessary to take action to reduce gasoline price spikes if  
22 market manipulation is identified.

23 Next slide, please.

24 To provide a little bit more background, the spot  
25 market is where large quantities of gasoline, tens of

1 thousands of barrels, can be bought and sold for near-term  
2 delivery. Notably, even though only a fraction of gasoline  
3 consumed in California is traded on the spot market, the  
4 spot price influences the cost of wholesale gasoline sold  
5 and loaded onto trucks, which is passed on to the price  
6 drivers pay at the pump.

7 Next slide.

8 This graph shows the influence the spot market  
9 price, shown in blue, has on the retail price of gasoline  
10 in California, shown in red. I've highlighted, in yellow,  
11 the price spikes observed in late summer over the last two  
12 years. When the spot market price spikes, retail prices  
13 spike soon after.

14 The Division of Petroleum Market Oversight  
15 identified suspicious trading activity in September of 2023  
16 that moved the market up by nearly \$0.50 per gallon. Soon  
17 after, Californians were paying over \$6.00 a gallon at the  
18 pump.

19 Therefore, it's critical to gather the necessary  
20 information on spot market transactions to investigate  
21 these anomalies and take action if market manipulation  
22 occurs.

23 Next slide, please.

24 The spot market reporting requirements have been  
25 revised to increase situational awareness of factors that

1 cause market volatility and price spikes. These revisions  
2 will provide much needed data to better follow the market  
3 in nearly real time, which can be critical in times of  
4 price volatility.

5           Some of the key improvements include clarifying  
6 the list of reported reporting entities to ensure data is  
7 collected from all market participants, specifying the  
8 circumstances when trades need to be reported, as well as  
9 clarifying that only spot market transactions are required,  
10 reducing burden for many parties that are already  
11 reporting, splitting the data collection process into  
12 separate trading and settlement forms to improve tracking  
13 of all trading activities, and improving details on the  
14 pricing structure of these transactions.

15           Next slide, please.

16           Here are the next steps. If approved, the  
17 package will be submitted to the Office of Administrative  
18 Law for review tomorrow. For those wanting to submit  
19 comments on the docket, I would like to direct their  
20 attention to the Notice of Proposed Emergency Action for  
21 guidance because there are specific instructions. The  
22 docket is 23-OAR-03.

23           SB X1-2 requires the Office of Administrative Law  
24 to review these regulations as an emergency, which means  
25 that OAL has ten days to review after receiving them. OAL

1 and the CEC will accept public comment for the first five  
2 days of that ten-day period. Based on this timeline, we  
3 expect the regulations to take effect on February 26th.

4 Staff recommends that you approve the revised  
5 spot market reporting requirements.

6 That concludes my presentation. Chad Oliver from  
7 our Chief Counsel's Office and I are available to respond  
8 to your questions.

9 But before we do that, we have a brief comment  
10 from the Division of Petroleum Market Oversight, so I'll  
11 turn it over to Tai Milder, who is appearing today by Zoom.

12 Thank you.

13 CHAIR HOCHSCHILD: Tai, are you able to hear us?

14 MR. MILDER: Yes, I am, Commissioner. I'm trying  
15 to start the video here, just -- there we go.

16 Thank you, Jeremy.

17 On behalf of the Division of Petroleum Market  
18 Oversight, or DPMO, we'd like to thank Jeremy and his team  
19 in the Energy Assessments Division for their work on this  
20 important rulemaking.

21 As Jeremy mentioned, I am Tai Milder, Director of  
22 DPMO. Our core purpose is to protect consumers. This  
23 includes looking for ways to bring additional transparency  
24 to California's gasoline market. These specific spot  
25 market reporting requirements that are being considered



1 today are a key component of DPMO's market monitoring  
2 function, and they're a vital tool for effective oversight.

3 As Jeremy mentioned, these revisions increase  
4 transparency by clarifying who needs to report trade and  
5 what kinds of trades need to be reported. For many of the  
6 parties that are currently reporting, these changes will  
7 actually make compliance easier and less burdensome.

8 On behalf of DPMO, I want to commend CEC for  
9 considering these steps well in advance of the summertime,  
10 which is when the market has been more susceptible to price  
11 spikes. We appreciate having this opportunity to voice our  
12 support for these revisions, and we look forward to future  
13 collaborations with CEC staff.

14 Thank you so much.

15 CHAIR HOCHSCHILD: Thank you. And just again, on  
16 behalf of all of us at the Commission, Tai, I just want to  
17 say thank you for being willing to step up into this new  
18 and really important role as the Director of the Division  
19 of Petroleum Market Oversight to help protect the public.  
20 Just thrilled to have you join the team and bring so much  
21 good judgment and experience and collaboration to the role.  
22 Just really been wonderful to have you on board.

23 And with that, let's open up item five to public  
24 comment and then we'll go to commission discussion.

25 MS. BADIE: Thank you.

1           The Commission now welcomes public comment on  
2 item five. If you're in the room with us, we're asking  
3 folks to use the QR code located in the back of the room or  
4 visit the Public Advisor table. Dorothy Murimi is  
5 available for assistance there. And if you're joining us  
6 on Zoom, please use the raise hand feature on your screen.  
7 If you're joining us by phone, press star nine to let us  
8 know you'd like to make a comment.

9           And so we're going to go to folks in the room  
10 first.

11           Tanya DeRivi, if you'd like to make a comment,  
12 please approach the podium. We're asking folks to spell  
13 their name for the record and then also limit your comments  
14 to two minutes or less.

15           After that, we'll hear from Sophie Ellinghaus.

16           MS. DERIVI: Good morning. Just for  
17 clarification, I'm allowed to offer comments on item four,  
18 even though it was an informational item, for this item?

19           MS. BADIE: Our open public comment period was  
20 item one, but this is SB X1-2. So if you would like to  
21 make a comment on that?

22           MS. DERIVI: Thank you. My name is Tanya DeRivi,  
23 T-A-N-Y-A. DeRivi is D, like David, -E, capital -R-I-V,  
24 like Victor, -I.

25           The legislature created this Committee to provide

1 the CEC with important direction from a diverse set of  
2 experts on the state's transportation fuels market. As  
3 such, there are some guiding rules and principles we wish  
4 to highlight.

5 One, it will be critical to welcome balanced  
6 viewpoints and expertise, including those with a deep  
7 understanding of California's transportation fuels market.

8 Two, the state has already acknowledged  
9 Californians need for transportation fuels for decades to  
10 come, and the petroleum based fuels will be an essential  
11 part of our fuels mix.

12 Three, implementation of SB X1-2 demonstrates the  
13 economic realities of policies that drive higher gas  
14 prices, a fact that the DPMO recently stressed by citing  
15 structural market supply challenges and the influence of  
16 price reporting agencies in a market with fewer and fewer  
17 spot transactions occurring.

18 And four, we would encourage the committee to  
19 review decades of CEC's integrated Energy Policy Reports  
20 and the work of the PMAC. Both will have relevant  
21 background about the growing divide between California's  
22 continued demand for transportation fuels and its ability  
23 to provide an affordable and reliable supply of energy.

24 For example, the 2005 IEPR noted the growing gap  
25 between in-state refining capacity and Californians' demand

1 for transportation fuels as the state made efforts to  
2 transition to an efficient, multi-fuel transportation  
3 market. It also noted that the petroleum industry is a  
4 critically important partner in this transition. The 2009  
5 IEPR noted that California needs sufficient fuel  
6 infrastructure to ensure reliable supplies of  
7 transportation fuels and that reliance on foreign oil  
8 imports increasingly puts the state's fuel supply at risk.

9           Finally, we appreciate the legislature included  
10 on the Committee a person who has knowledge of economics or  
11 business operations of the transportation fuels market and  
12 another person representing the petroleum fuels industry.  
13 These voices are critically important part of the  
14 conversation given how complex California's market is and  
15 the need for serious evaluation of any first of its kind  
16 untested margin cap and penalty well before any decision is  
17 made.

18           Thank you for allowing to speak on the prior item  
19 for this item. Thanks.

20           MS. BADIE: Thank you.

21           Oh, excuse me. Next we'll hear from Sophie  
22 Ellinghouse, so if you'd like to approach the podium,  
23 please spell your name for the record. We're asking for  
24 comments to be two minutes or less.

25           MS. ELLINGHOUSE: Hi. Sophie Ellinghaus. I'm

1 also with WSPA, but speaking to item five. Are you okay  
2 with that? Okay. And it's S-O-P-H-I-E  
3 E-L-L-I-N-G-H-O-U-S-E. All right. Great.

4 Good morning, everyone. We appreciate your  
5 efforts to understand how the transportation fuel markets  
6 work, they're very complicated, and the work that DPMO in  
7 releasing its most recent update has done, which especially  
8 recognized that California's price volatility has not been  
9 driven by any collusion or illegal gouging behavior. But  
10 WSPA remains concerned that issues are largely left  
11 unresolved by CEC's revised forms in the proposed emergency  
12 regulation. In fact, this proposal could worsen the  
13 suggested market transparency issues.

14 For example, you're considering requiring more  
15 documentation on both the trading and settlement phases of  
16 spot transactions. While prices reported during contract  
17 execution may influence the market, settlement prices,  
18 which are determined weeks or months later often, have no  
19 such influence on the market. So there is nothing to be  
20 gained by reporting this on a daily basis.

21 Moreover, pricing is subject to revision, in some  
22 cases multiple, after the settlement date. If reported  
23 daily, settlement information is likely to create confusion  
24 rather than improving transparency.

25 We recommend monthly reporting for settlements,

1 which would allow for more complete and accurate data.  
2 Otherwise, the result, I'm afraid, will be unnecessary  
3 ambiguity and inaccurate reporting not actually  
4 representative of the gas spot market.

5           Remember, also, that the CEC's goal was to obtain  
6 information while minimizing burden on industry. This  
7 proposal unfortunately accomplishes neither. To make  
8 matters worse, the CEC is doing this in the context of  
9 emergency rulemaking, which unnecessarily shortens the time  
10 for public input. Asking for additional transaction data  
11 is not a, quote, "emergency," which California law defines  
12 as a situation that calls for immediate action to avoid  
13 serious harm to public peace, health, safety, and general  
14 welfare. Even the DPMO concedes that gas price spikes have  
15 been happening since at least 2012 and can, quote, "occur  
16 anytime." In 2000, the AG even recognized that the  
17 structural supply challenges in California contribute to  
18 the volatility.

19           In short, the state has had ample time to adopt  
20 regularly-noticed non-emergency rules for almost 25 years,  
21 and you failed to do so. That does not justify bypassing  
22 proper public notice and comment by forcing consideration  
23 of these regulations on an emergency basis.

24           Thank you.

25           MS. BADIE: Thank you.

1           That concludes the in-room public comment. I'm  
2 going to transition over to Zoom.

3           The phone number ending in 385, I'm going to open  
4 your line. If you could state and spell your name for the  
5 record? We're asking for comments to be two minutes or  
6 less.

7           MR. UHLER: Hello, Commissioners. This is Steve  
8 Ehler, U-H-L-E-R.

9           One thing I note about what you call a spike in  
10 fuel prices is that it amounts to about \$0.02 a kilowatt  
11 hour or \$0.03 a kilowatt hour, which is not a large spike  
12 when you compare it to how you handle and allow electric  
13 prices to be set.

14           I have made comment both wanting to see the Form  
15 400 in the docket when you -- as soon as you submit it to  
16 the OAL.

17           And I've also commented with a concern because  
18 the fuel industry is a very fine just-in-time production  
19 method, and I'm concerned that in order to avoid penalties  
20 and so on and so forth, we're going to end up with just-in-  
21 case methods, which might require additional storage likely  
22 to be placed in low-cost areas which might affect  
23 disadvantaged communities.

24           But yeah, it's quite obvious that when a price  
25 spike happens in gasoline because you see it on the corner.

1 If we were to do the same thing to the utility industry,  
2 electric utility industry, you would have some people being  
3 quite surprised by what they're paying.

4 And the whole spot market thing is just, is a  
5 mechanism for where people are deciding what something will  
6 sell for. And there will probably always be a problem but  
7 don't let that cause a move from just-in-time manufacturing  
8 production to just-in-case.

9 Thank you.

10 MS. BADIE: Thank you for your comment.

11 That concludes public comment. Back to you,  
12 Chair.

13 CHAIR HOCHSCHILD: All right, let's go to  
14 Commissioner discussion, starting with the Vice Chair.

15 VICE CHAIR GUNDA: Thank you, Chair. I think I  
16 just wanted to make sure, you know, for the public record,  
17 you know, just kind of reminding what we are dealing with  
18 in terms of the SB X1-2.

19 The spirit of the law is really to make sure the  
20 consumers who are at the end of the pump are protected.  
21 And one of the key areas that the legislature have  
22 unanimously thought it's important is the importance around  
23 transparency of data and how by shining, you know, light on  
24 the market and generally the understanding and awareness of  
25 the petroleum industry as a whole would benefit everybody.



1 And, you know, how can we, you know, measure what's  
2 happening so we can adequately take the steps forward?

3           So in considering the many actions that the CEC  
4 has to do, whether in terms of developing the assessment,  
5 in terms of developing the transition plan, along with CARB  
6 or working with CDTFA, it is vital for us to have a  
7 thorough understanding of the different parameters of the  
8 industry, including the spot market. And I think, you  
9 know, from my vantage point, it's essential that any  
10 disturbances that we cannot completely understand today are  
11 dug in with more data to further understand so we can take  
12 action that's appropriate in the end that protects the  
13 consumer. And I think the CEC's role in this overall work  
14 is just public interest and how do we maximize our ability  
15 to protect the consumers.

16           I wanted to kind of bring, Jeremy, you back  
17 quickly, and maybe, Chad, you want to add. You know, I  
18 recognize that the legislature gave us the authority for  
19 emergency rulemaking, specifically recognizing that the  
20 issues around SB X1-2 are of import and really kind of  
21 emergent. So I want to recognize that and just wanted to  
22 see, you know, Jeremy, if you want to add to what you  
23 framed in a based on what you heard from the comments?

24           MS. SMITH: Sure. Yeah, I do think that,  
25 obviously, it's really important to collect the information

1 necessary to really just see what's happening. And the way  
2 it stands currently, we aren't collecting all that  
3 information. You know, we're collecting things that, you  
4 know, don't really belong in, you know, the spot market  
5 trading forums. We're collecting data that doesn't help  
6 inform our decisions. And I think it's really critical if  
7 we're going to, you know, protect Californians and keep an  
8 eye on this, that we really desperately need to collect  
9 this information and in a timely manner.

10           The most critical time periods for price  
11 volatility happen around the switch from summer to winter  
12 blend or winter to summer blend, and we're approaching  
13 that. Southern California just switched two weeks ago to  
14 summer blend. Northern California will be doing so as  
15 well. So it's really critical that, you know, we know that  
16 these are the time periods when prices become really  
17 volatile. So we need to move quickly and collect this  
18 data, else, you know, we're really just not able to see how  
19 the market is operating and make informed decisions.

20           VICE CHAIR GUNDA: Thank you.

21           Just wanted to go to Director Milder. And just,  
22 again, appreciate the work that you're doing. Any comments  
23 that you might have?

24           MR. MILDER: Yes, Vice Chair, thank you. I first  
25 want to echo Jeremy Smith's comments about the timeliness

1 of this work and the urgency of it and appreciate EAD's  
2 engagement with industry, as indicated in this public  
3 comment period, as well.

4 I also wanted to sort of respond to a  
5 characterization of DPMO's public letter. We had one in  
6 September and another in January where we identified some  
7 problems with the spot market, including refinery under-  
8 supply during maintenance, lack of liquidity at the spot  
9 market, and volatility. Those make the spot market more  
10 susceptible to manipulation. But at this stage, bringing a  
11 law enforcement and a prosecutor's mindset to this role,  
12 we're following the facts. We're not prejudging what  
13 happened in our last price spike, but it would be incorrect  
14 to say that we reached a conclusion at this point whether  
15 or not collusion or market manipulation was to blame.

16 So at this point, we're trying to address some of  
17 the root causes that make our market more volatile, more  
18 illiquid, more susceptible to manipulation, and we'll  
19 address the underlying conduct when appropriate.

20 VICE CHAIR GUNDA: Thank you, Director Miller.  
21 Again, thank you for your work and your team's work on  
22 supporting the State of California and the consumers in  
23 ensuring that they are protected.

24 Chad, just kind of quickly, there is a discussion  
25 on -- and if you could just elevate the authority that CEC

1 has within the emergency rulemaking and kind of the public  
2 good sentiment and the value of that in this particular  
3 case?

4 MR. OLIVER: Sure. And I'll just add quickly on  
5 to what my colleagues have already said about the  
6 importance of this information, the importance of this  
7 information and the urgency in collecting it at this time.

8 The legislature, in enacting SB X1-2, recognized  
9 that urgency, and in the statute in Public Resources Code  
10 section 25367 provided that any regulations implementing  
11 Chapter 4.5 of the Public Resources Code, which includes --  
12 which is the section of the statute implemented by these  
13 regulations, must be deemed by an emergency -- deemed as an  
14 emergency by the Office of Administrative Law, and that  
15 such regulations are necessary for the immediate  
16 preservation of public peace, safety, and general welfare.

17 And I would add that, you know, I think we  
18 welcome the commenters' continued engagement in this issue  
19 as the CEC continues to refine the reporting requirements  
20 as the team seeks to better understand the petroleum  
21 market, including the spot market.

22 VICE CHAIR GUNDA: Chad, just a follow-up. What  
23 kind of ability would the commenters have to work over the  
24 next 10, 15 days with us?

25 MR. OLIVER: So from the start, as soon as these

1 regulations, if they are approved, as soon as they are  
2 submitted to the Office of Administrative Law, there will  
3 be a five-day public comment period, and commenters can  
4 submit comments both to the Office of Administrative Law  
5 and to the Energy Commission. And instructions for  
6 submitting those comments are in the Notice of Proposed  
7 Action, which is in the docket 23-OAR-03.

8           And I think, in addition to that, commenters and  
9 interested members of the public can reach out to the team  
10 working on this, including Jeremy Smith and myself. And  
11 the CEC also intends to continue this rulemaking  
12 proceeding. This is the first step. And there's a second  
13 phase that's in progress. And there will be a public  
14 workshop on the second phase coming up shortly.

15           VICE CHAIR GUNDA: Great. Thank you, Chad.

16           And I just wanted to add a couple of pieces. You  
17 know, just I hear the comments made by Tanya and Sophie,  
18 and it's important that you're here providing input  
19 regularly on the work we do. And I want to just  
20 reemphasize the sentiment that, you know, CEC is, you know,  
21 working diligently on both sticking to the spirit of the  
22 law and ensuring that we have an objective outlook on how  
23 we approach things. I am of the mindset that data is  
24 essential in measuring the problem and would welcome your  
25 participation to make sure that, you know, we are gathering

1 the right information.

2           And it would not be honest of me if I don't  
3 recognize the industry's continued collaboration on the  
4 data that you've been submitting. But at the same time,  
5 the data that we currently have does not answer all the  
6 questions. And it's important for us to lay out the exact  
7 storyline, narrative, and the causation of the factors that  
8 are causing the price spikes. And I want to just make sure  
9 I offer this to the industry and the stakeholders who are  
10 interested in this issue.

11           The basic ask from the legislature is to avoid  
12 price spikes. And I think if we see another year of price  
13 spikes, it would really lose trust, not only in the  
14 industry, but in the state as a whole. So I think it's  
15 important for us to do everything we can, you know, to make  
16 sure that we understand the problem and can take timely  
17 action. So I would continue to ask the industry and the  
18 stakeholders as participation in the work we do and making  
19 the work as robust and good as possible.

20           So with that, I will lend support to this and  
21 pass it on to you, Chair.

22           CHAIR HOCHSCHILD: Yeah, just the only comment I  
23 would add, and I thank you for the presentations and the  
24 public comment, is that the Vice Chair and I are personally  
25 visiting every single operating refinery in the state. We

1 had the most recent of those meetings last week. It's been  
2 really fruitful. There's a level of detail you can get  
3 into about the facilities, the constraints they're under,  
4 and some of the operating dynamics that's been really  
5 fruitful, and that, you know, we don't have to agree on  
6 every issue, climate science or the pace and direction of  
7 the energy transition is under where we have to agree,  
8 though, on the necessity to resolve the price spikes.

9           And that's really the mandate and the focus. And  
10 we really come into this with the spirit of open mindedness  
11 and problem solving. It is, in my view, a more difficult  
12 challenge to resolve than, for example, what we're dealing  
13 with on the electric grid, where we've been able to add  
14 basically ten gigawatts of storage in five years. Much  
15 harder to do that in the petroleum refining space.

16           But these visits have been great. I really want  
17 to thank the Vice Chair and all the teams that are helping  
18 facilitate those and look forward to continued engagement  
19 on that.

20           And with that, I would welcome a motion.

21           Oh, sorry, I'm sorry, Commissioner Monahan,  
22 please go ahead.

23           COMMISSIONER MONAHAN: Well, I just, first, I  
24 want to acknowledge Jeremy and Chad. I think you both laid  
25 out a really clear case for why we need this emergency

1 rulemaking and that this is really following up on the  
2 legislature's mandate to us. So it's our responsibility.

3 And, you know, I've been in the transportation  
4 space in California for 30-plus years and there has been a  
5 mystery surcharge for 30-plus years. And this is a term  
6 that Severin Borenstein from Berkeley has coined, but it  
7 really sticks with me. And I mean, this is an opportunity  
8 to try to unveil why Californians are saddled with higher  
9 prices for mysterious reasons.

10 And this is particularly important as we think  
11 about lower income families that spend a disproportionate  
12 amount on gasoline. Up to 16 percent of their income,  
13 disposable income, is spent on just gasoline. So this is  
14 an issue of equity, as well as just transparency.

15 CHAIR HOCHSCHILD: Well said.

16 Any other comments?

17 And with that, I welcome a motion on item five  
18 from the Vice Chair.

19 VICE CHAIR GUNDA: Thank you, Chair. Move item  
20 five.

21 CHAIR HOCHSCHILD: Is there a second from  
22 Commissioner Monahan?

23 COMMISSIONER MONAHAN: I second.

24 CHAIR HOCHSCHILD: All in favor, say aye.

25 Vice Chair Gunda?



1 VICE CHAIR GUNDA: Aye.

2 CHAIR HOCHSCHILD: Commissioner Monahan?

3 COMMISSIONER MONAHAN: Aye.

4 CHAIR HOCHSCHILD: Commissioner Gallardo?

5 COMMISSIONER GALLARDO: Aye.

6 CHAIR HOCHSCHILD: Commissioner McAllister?

7 COMMISSIONER MCALLISTER: Aye.

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

10 We'll turn now to item six, order instituting  
11 informational proceeding.

12 I welcome Erik Stokes.

13 MR. STOKES: Good morning, Chair and  
14 Commissioners. My name is Erik Stokes, Chief of Staff for  
15 Commissioner Gallardo.

16 I'm requesting Commissioner approval today for  
17 item six, which will open up an informational proceeding on  
18 Lithium Valley.

19 Next slide, please.

20 For this item, I'm going to talk about the  
21 benefits in two parts, starting with the Lithium Valley  
22 vision itself. There's been a number of reports, most  
23 notably the Lithium Valley Commission report, that have  
24 identified the benefits from building a domestic lithium  
25 supply chain in the Salton Sea. And we've organized these

1 benefits around three buckets.

2           The first is bringing community benefits in the  
3 form of good paying jobs, economic development and  
4 investment to a region that really needs this as well as  
5 deserves this.

6           Second is the environmental benefits. Recovering  
7 lithium from geothermal brine has the lowest environmental  
8 footprint of all the methods for lithium mining. On top of  
9 that, by having this domestic supply chain, we have the  
10 opportunity to really reduce the embedded emissions from  
11 battery supply logistics.

12           And finally, just on the security front, lithium  
13 batteries really are the linchpin to our clean energy  
14 transition. Currently, we're incredibly reliant on  
15 imported lithium supply chains to meet our demands. Having  
16 a domestic supply chain can help relieve that pressure. A  
17 recent LBNL report estimated Lithium Valley could supply  
18 over 375 million electric vehicle batteries. That's more  
19 than the cars currently on the U.S. roads today.

20           The photo you see on the screen is of Governor  
21 Newsom at a developer site touting the benefits of Lithium  
22 Valley last year during his State of the Union tour. He  
23 was also joined by Assemblymember Garcia and the Lithium  
24 Valley Commission Sylvia Paz, along with the chairman of  
25 the Torres Martinez tribe. They're also there visible.

1           So we see this informational proceeding having a  
2 number of benefits to the state. There are a number of  
3 entities involved with Lithium Valley. This informational  
4 proceeding will help coordinate activities to make sure we  
5 are being efficient with our resources, that we're not  
6 duplicating efforts, and that we're identifying and  
7 addressing challenges and gaps. In addition, this  
8 proceeding will provide a forum for new information and  
9 ideas that can guide our future efforts and activities on  
10 this topic. And all that will help ensure that benefits  
11 are maximized for the local communities.

12           Next slide, please.

13           So some of the background that led to this  
14 informational proceeding.

15           First, in 2020, AB 1657 established the Lithium  
16 Valley Commission, which was composed of 14 representatives  
17 and experts to explore the opportunities and challenges to  
18 building a lithium ecosystem in the Salton Sea region. The  
19 Commission started meetings in 2021, conducting  
20 investigations, analyses, and substantial public  
21 engagement.

22           Last year in 2022, the Commission submitted its  
23 report, including its findings and 15 recommendations for  
24 Lithium Valley. So with that report in hand this last year  
25 the CEC has spent most of this last year focused on

1 learning more about the place and the people to lay the  
2 foundation for the Lithium Valley vision. Our efforts have  
3 taken on a couple different forms.

4           The first has been increasing attention and  
5 visibility on Lithium Valley. We needed to provide first-  
6 hand experiences in the area to show people, many in  
7 decision-maker positions, that the opportunity was, one  
8 real, and then also that the needs of the region and the  
9 communities are deep. One example of this was a tour we  
10 set up with the Department of Energy and the Department of  
11 Defense. Another example of this has been bringing all  
12 five CEC Commissioners and state representatives to visit  
13 the area. As you can see in the photo, Vice Chair Gunda  
14 and Commissioner Monahan both had the opportunity to  
15 experience the area and the people first-hand.

16           The second has been engaging and building  
17 relationships with the local residents, including the  
18 tribes, community organizations, and local government to  
19 gain a deeper understanding of their dynamics, challenges,  
20 and needs. We've also decided to be the lead convener of  
21 the state entities involved with Lithium Valley and had an  
22 initial meeting with them late last year. They expressed  
23 their appreciation for the Energy Commission taking the  
24 lead to help organize everyone and all state entities were  
25 eager to collaborate.

1           One key question we've been getting consistently  
2 through our discussions we've had with the local residents  
3 as well as other state agencies has been, you know, what is  
4 happening with Lithium Valley? That really inspired us to  
5 request this proceeding to have a forum for discussion with  
6 the public and a formal mechanism to convene interested  
7 participants at both the local state and federal levels to  
8 gather the necessary information to really bolster the  
9 Lithium Valley vision.

10           Next slide, please.

11           So we've identified several potential topics  
12 under this proceeding. You know, many of these topics were  
13 identified by the Lithium Valley Commission. You know, I  
14 just want to kind of highlight a couple of those.

15           One of the first topics is having a dialogue  
16 around the Lithium Valley vision. How does this vision fit  
17 into the broader state's lithium economy? And how can we  
18 better align it with federal priorities to onshore battery  
19 manufacturing?

20           We also plan to take a deeper dive into the  
21 Lithium Valley Commission's recommendations and better  
22 identify and understand what organizations are working on  
23 which recommendations, where do we have gaps and where  
24 might we need potential policies to fill those gaps.

25           Lastly, one of the key topics we plan to focus on

1 is around the infrastructure and how do we finance that  
2 infrastructure to support this new industry. The Lithium  
3 Valley Commission identified significant infrastructure  
4 needs to support the new lithium ecosystem, as well as the  
5 communities in the region.

6 On that note, the photo on the slide shows  
7 Commissioner Gallardo and McAllister, along with other  
8 state representatives and staff, during a visit with the  
9 mayor and city manager of Calexico who were explaining  
10 their excitement to install EV charging stations in their  
11 city and the multitude of challenges they were facing in  
12 doing so, including a lot of the equipment upgrades.

13 So we hope to continue doing robust engagement  
14 with the community and we expect the additional information  
15 we exchange through this proceeding can guide future  
16 efforts and continue to bring together kind of the local,  
17 state, and federal stakeholders and identify kind of some  
18 specific actions to really move this forward.

19 Next slide, please.

20 And so we thought we'd include this great image  
21 taken during our tour with Department of Energy and the  
22 Department of Defense, especially when we visited the  
23 Torres Martinez tribal headquarters. Chair Hochschild and  
24 Dee Dee Myers from GO-Biz are in the center with Chairman  
25 Tortez. The tribe is interested to explore business

1 opportunities related to Lithium Valley and has had a  
2 chance to provide their history, context, and expertise to  
3 us at the state level as well as to federal  
4 representatives. It's an example of a powerful connections  
5 being made because of Lithium Valley, and we hope to  
6 continue that progress.

7           With that, I request the Commission adopt this  
8 informational proceeding on Lithium Valley. That concludes  
9 my presentation. I'm happy to answer any questions.

10           And just as another note, we now have a Lithium  
11 Valley Vision webpage that went live today, as well as a  
12 subscription topic, so people can sign up and stay up to  
13 date on various workshops and other events that we're  
14 planning.

15           CHAIR HOCHSCHILD: Thank you so much, Erik.

16           With that, let's go to public comment on item  
17 six.

18           MS. BADIE: Thank you.

19           This is Mona Badie again, the Public Advisor for  
20 the Energy Commission. The Commission now welcomes public  
21 comment on item six. We'll start with folks in the room.  
22 We're asking folks in the room to use the QR code to let us  
23 know. We also have Dorothy at the Public Advisors table to  
24 submit your information if you want to do it that way. And  
25 then if you're joining us on Zoom, please use the raise

1 hand feature. And if you're joining us by phone, please  
2 press star nine to let us know.

3 And in the room, we have Jeremy Smith.

4 Jeremy, if you'd like to approach the podium,  
5 please spell your name for the record. And we're asking  
6 for comments to be two minutes or less. There will be a  
7 timer on the screen. Thank you.

8 MR. SMITH: Thank you, Commission. Jeremy Smith,  
9 J-E-R-E-M-Y S-M-I-T-H, here on behalf of the State Building  
10 and Construction Trades Council of California. We are a  
11 council of construction trade unions collectively that  
12 represent over 450,000 construction workers in the state  
13 who are in construction trade unions.

14 The Commission is -- today you're considering  
15 doing a strategic plan for the Lithium Valley on how to  
16 move forward on recommendations from the Lithium Valley  
17 Commission. Should the Commission decide to proceed we  
18 would urge the Commission to focus on where the Lithium  
19 Valley Commission fell short and its last-minute rejection  
20 of its own recommendations made following its workforce  
21 development workshop, namely requirements that projects,  
22 one, prioritize development and hiring of a local  
23 workforce, two, provide resources to support the planning  
24 and development of necessary training and educational  
25 opportunities, and three, commit to requirements for strong



1 workforce and labor standards, including project labor  
2 agreements to create high-quality jobs and support state  
3 certified apprenticeship opportunities.

4 As you know, AB 1657 required the Lithium Valley  
5 Commission to investigate and analyze eight topics, one of  
6 which included economic benefits.

7 In February, 2022, the Lithium Valley Commission  
8 held a workforce development workshop and concluded, quote,  
9 "We find that it is imperative that projects  
10 prioritize development and hiring of a local workforce  
11 and provide resources to support the planning and  
12 development of necessary training, and educational  
13 opportunities and commit to requirements for strong  
14 workforce and labor standards, including project labor  
15 agreements to create high quality jobs and support  
16 state certified apprenticeship opportunities." close  
17 quote.

18 Fifteen recommendations were then made to the  
19 Commission. Ultimately, in the drafting and redrafting of  
20 the final recommendations, some of which were posted during  
21 right before the Lithium Valley Commission meetings, the  
22 recommendations were whittled that way largely in favor of  
23 economic incentives to developers.

24 As we all embark on these next steps in the  
25 lithium industry, we urge the Commission to keep at the

1 front of their minds the construction workers who will be  
2 employed to build the facilities. Capturing the work in  
3 the industry in this area of the state is important, but  
4 not at the expense of the health and safety of the workers  
5 and their livelihoods.

6 Finally, I urge you to look around this room  
7 right now, and when you leave today, look around at the  
8 building. This was built under a project labor agreement  
9 with skilled and trained workers from state-approved  
10 apprenticeship programs. Those same type of workers exist  
11 in the Lithium Valley and in this area of the state. They  
12 are skilled and trained and ready to get to work. And this  
13 is an example of their techniques and their know-how and  
14 how they go about building things that they are employed  
15 on.

16 Thank you for your time today.

17 MS. BADIE: Thank you.

18 Next we'll transition to Zoom. Sarah Arveson,  
19 I'm going to open your line. If you could please spell  
20 your name for the record? We're asking for comments to be  
21 two minutes or less.

22 MS. ARVESON: Hi, my name is Sarah Arvidsson.  
23 That's S-A-R-A-H A-R-V-E-S-O-N. I'm a researcher in the  
24 green economy and the Vice President of UAW Local 5810,  
25 which represents 12,000 professional academic workers

1 across the University of California.

2 As OIAP engages stakeholders for a lithium  
3 economy in Imperial Valley, UAW members urge you to support  
4 the construction of community benefits agreements, or CBAs.  
5 CBAs are binding agreements between a private company and  
6 at least one community or labor organization or municipal  
7 body, which help establish specific high-road job quality  
8 standards, inclusive hiring practices, workforce training,  
9 and other measures to ensure projects substantively benefit  
10 the community where they are being built.

11 CBAs can ensure that impacted residents,  
12 including Natives and workers, have a meaningful voice in  
13 the industry's growth and that the community's needs are  
14 centered. Large federal funding opportunities for the  
15 lithium industry, including those from DOE, are requiring  
16 community benefits plans, so fostering community benefits  
17 agreements will also position California industries as  
18 attractive applicants.

19 Labor and community groups are ready to engage in  
20 a collaborative process that centers impacted residents  
21 while growing California's green economy. So we hope  
22 you'll join us in fostering these community benefits  
23 agreements with Lithium Valley industries as well.

24 MS. BADIE: Thank you for your comment.

25 Next, we'll hear from Patrick Dexter. Patrick,

1 I'm going to open your line. Oh, Patrick, your hand just  
2 went down. Okay, there we go. Patrick, I'm going to open  
3 your line. Please unmute on your end. Please spell your  
4 name for the record. We're asking for comments to be two  
5 minutes or less.

6 MR. DEXTER: Hello, Patrick Dexter,  
7 P-A-T-R-I-C-K D-E-X-T-E-R. I am an international  
8 representative with Region 6 of the United Auto Workers  
9 Union. UAW represents nearly 100,000 active and retired  
10 members in California, and our members do the work that  
11 will power the transition to a green economy from the  
12 research and development that develops new technology to  
13 the manufacturing and assembly work that will mass produce  
14 new technologies.

15 UAW could not be more excited about the promise  
16 of lithium extraction in Imperial County. However, without  
17 careful planning, this promise will not be realized, and it  
18 will remain just a fantasy. There are well-documented  
19 health hazards and toxic byproducts associated with the  
20 construction and operation of direct lithium extraction  
21 facilities. These hazards do not stop at extraction.  
22 There are hazards associated with every stage of the  
23 lithium value chain, especially toxic emissions from the  
24 battery assembly process. This threatens the workers who  
25 build and maintain these facilities as well as the

1 community members who will live near them.

2           Furthermore, there is no guarantee that later  
3 stages of the lithium value chain will be located in  
4 Imperial County. It will require a very deliberate policy  
5 intervention to keep the lithium that's extracted in  
6 Imperial County in Imperial County for later stages of the  
7 assembly process.

8           So we have a pretty difficult challenge ahead of  
9 us, which is, on the one hand, to attract new industries  
10 and economic growth to the area, but to do so in a way that  
11 prevents companies from further degrading the environment  
12 and to do so in a way that empowers the community of  
13 residents who currently live there.

14           Given the large amount of public subsidies  
15 flowing to companies in Imperial County, we must also  
16 ensure that taxpayer money does not subsidize low-road  
17 employers who break the law and mistreat their employees.

18           The CEC should consider exploring every tool at  
19 their disposal, including but not limited to community  
20 benefits agreements, to ensure the best possible outcomes  
21 for Imperial County communities.

22           UAW is excited to work with the CEC to bring this  
23 bold vision into reality, and we hope to work together  
24 around the principles that the community must not suffer  
25 the environmental consequences, that lithium-related

1 industries should be located in Imperial County, and that  
2 all public funding and incentives for companies should  
3 support higher-road jobs.

4 Thank you.

5 MS. BADIE: Thank you.

6 Next, we have caller ending in 385. I'm going to  
7 open your line. Please state and spell your name for the  
8 record. We're asking for comments to be two minutes or  
9 less. 385, your line is open. We're not hearing any  
10 audio, so we'll move on to the next caller.

11 Christina Marquez, I'm going to open your line.  
12 If you could please spell your name for the record. We're  
13 asking for comments to be three minutes or less -- two  
14 minutes or less, excuse me.

15 MS. MARQUEZ: Thank you very much. Good morning.  
16 Christina Marquez speaking on behalf of 3,600 power  
17 professionals and union electricians in San Diego and  
18 Imperial counties.

19 We've been in Imperial Valley since the '80s and  
20 have had a physical building, a state approved joint labor  
21 management apprenticeship in the valley since 2009.  
22 Imperial Valley has some of the highest unemployment rates  
23 in California and we want to change that. Now is the time  
24 to take advantage of ensuring the current generation of  
25 members of the community benefit for generations to come.

1 All of us, including you, have an opportunity to  
2 change their lives and the generations. Ensuring there are  
3 high-road and high wage jobs and career opportunities for  
4 Imperial Valley will do just that. We must prioritize  
5 local hire with the use of a skilled and trained workforce.  
6 provide resources to support more state approved  
7 apprenticeships and pre-apprenticeships, and as Jeremy  
8 Smith from the State Building Trade said, commit to  
9 requirements for strong workforce and labor standards,  
10 including project labor agreements, to create high quality  
11 jobs and support state-certified apprenticeship  
12 opportunities.

13 As I said before, IBEW 569 is established there  
14 and we really hope that we can work with you. It's going  
15 to take all of us to get this moving forward and ensure  
16 that we do this right.

17 Thank you for your time. Have a great day.

18 MS. BADIE: Thank you for your comment.

19 Phone number ending in 385, I'm going to open  
20 your line again. You'll need to unmute on your end by  
21 pressing a star six.

22 MR. UHLER: Hello, Commissioners. This is Steve  
23 Uhler. This is more of a comment on the procedure of how  
24 you run your meetings.

25 There's a docket for this item, but the docket

1 only has a memo opening the docket. It would be a good  
2 place to put various things, like presentations. It didn't  
3 show up on the business meeting site until 9:30. It would  
4 be nice to have these presentations the night before so we  
5 could brief ourselves.

6 So hopefully the Chair, and being director and  
7 head of the agency, will think about the public and how  
8 much time they get to review the information.

9 Thank you.

10 MS. BADIE: Thank you for your comment.

11 Next, we'll hear from Sean Keoni-Ellis. I'm  
12 going to open your line if you could please unmute on your  
13 end and spell your name for the record? We're asking for  
14 comments to be two minutes or less.

15 MR. ELLIS: Good morning, Commissioners. Sean  
16 Ellis, S-E-A-N E-L-L-I-S. Good morning. I am an organizer  
17 with the United Association of the Plumbers and Pipefitters  
18 in Imperial and San Diego County.

19 I stand in solidarity with the state building  
20 trades and our brothers and sisters in the IBEW. We've  
21 been out in Imperial County for well over 100 years. And  
22 unfortunately, when a lot of these geothermal plants were  
23 built 10, 20 years ago in their cycles, we didn't have  
24 project labor agreements. And matter of fact, we had very  
25 weak workforce agreements.



1           So let's go to today in 2024. Today, Imperial  
2 County has over 30 percent unemployment. Every single day  
3 we go out there and we see the crippling disparity of the  
4 community while watching workers from Arizona, Utah, Nevada  
5 build these geothermal energy plants, do the turnarounds,  
6 make over \$70.00 an hour, and then head to other states  
7 with weaker worker rights and, honestly, weaker human  
8 rights than we have here in our great state of California.

9           So, you know, as an organizer of the community,  
10 an organizer of the labor movement, and a believer that the  
11 labor movement and workforce agreements, skilled and  
12 trained workforce, and project labor agreements not only  
13 build a ladder of opportunity to the middle class, I stand  
14 here today to urge you guys, these plants, these facilities  
15 should not proceed without PLAs. That should be the  
16 standard. It doesn't make sense that we will begin to  
17 build a whole new infrastructure of green energy while  
18 leaving that whole community behind.

19           So I urge you today, please, let's push for  
20 project labor agreements, stronger workforce agreements,  
21 and let's uplift the community of Imperial Valley and  
22 neighboring communities to do the right thing. Provide the  
23 opportunity for middle class families to grow. Right now  
24 in Southern California, especially in San Diego and  
25 Imperial County, we are the second most inflated place to

1 live in the country. Here's an opportunity as great  
2 leaders, as great Commissioners, to turn this tide, to set  
3 the example. Today we watched City of San Diego sign a PLA  
4 across the land that's going to change thousands of  
5 workers' lives.

6 So I urge you today, please, let's work forward  
7 together as great leaders. Let's build project labor  
8 agreements, workforce standards, and it's uplift the cat  
9 the Imperial County and lithium extraction.

10 Happy Valentine's Day. God bless you guys and  
11 have a beautiful day.

12 MS. BADIE: Thank you for your comment.

13 Next, we're going to move to a caller that's  
14 identified as Jobs to Move America. I'm going to open your  
15 line. If you could please state and spell your name for  
16 the record? We're asking for comments to be two minutes or  
17 less. Oh, I lost your raised hand. Oh, there we go.  
18 Okay, I'm going to open your line now.

19 MR. FIGURASIN: Hi. Sorry about that. Happy  
20 Valentine's Day. My name is Theo Figurasin, that's  
21 T-H-E-O, and my last name is Figurasin, that's F, as in  
22 Frank, -I-G-U-R-A-S-I-N. And I'm a senior researcher with  
23 Jobs to Move America, a strategic policy center that works  
24 to advance a fair and prosperous economy. My organization  
25 is a member of the Lithium Valley Community Coalition.

1           We're pleased to hear that the California Energy  
2 Commission is gathering information to realize the Lithium  
3 Valley vision, and we urge you to gather as much knowledge  
4 as possible on policy tools that will meaningfully benefit  
5 Imperial County communities.

6           One such policy tool, my colleague Sarah Arveson  
7 described, were community benefits agreements.

8           But I want to emphasize that they're critical to  
9 realizing a Lithium Valley vision that centers community  
10 members because, well, number one, CBAs elevate community  
11 voices and give them a meaningful seat at the table, thus  
12 an increased investments in a project success.

13           Two, community benefits agreements create avenues  
14 for ongoing engaged partnerships between companies,  
15 workers, and the community so that the California's lithium  
16 economy grows, the Imperial County community and workforce  
17 is not left behind.

18           And lastly, the Department of Energy has adopted  
19 a version of CBA's called Community Benefits Planning for  
20 their funding opportunities. To put it simply, applicants  
21 with meaningful community benefits planning will have a  
22 competitive edge in applying for future DOE funding  
23 opportunities like the \$3.5 billion to strengthen domestic  
24 battery manufacturing.

25           I look forward to providing you with more in-

1 depth information on CBAs in the open docket and these  
2 proceedings. You'll be hearing a little bit about Jobs to  
3 Move America's CBA work with BYD later on in this agenda,  
4 and it hopes it provides a real-time example of the  
5 positive impact of partnership through a CBA.

6 I also want to note that over in Santa Barbara  
7 for offshore wind there was a community benefits agreement  
8 that was established for offshore wind there.

9 As was said in the California State Assembly  
10 convening of the Lithium Valley Blue Ribbon Commission last  
11 August, in 2023, we must not forget that Lithium Valley is  
12 Imperial Valley and the Lithium Valley vision must not lose  
13 sight of the Imperial Valley community.

14 Thank you.

15 MS. BADIE: Thank you for your comment.

16 That concludes public comment for item six. Back  
17 to you, Chair.

18 CHAIR HOCHSCHILD: Thank you.

19 Let's go to Commission discussion, starting with  
20 Commissioner Gallardo.

21 COMMISSIONER GALLARDO: Thank you.

22 First, I want to express my gratitude for all of  
23 those who carved out time to make public comment today. We  
24 really appreciate it. So Jeremy, Sarah, Patrick,  
25 Christina, Steve, Sean, and Theo, thank you again for

1 taking your time. And a lot of what you said, I think,  
2 validates what we're doing here with this proceeding to  
3 ensure we have a collaborative process. We can exchange  
4 information and discuss careful planning to better support  
5 the local community. And as I think it was Christina who  
6 said it will take all of us. That's very accurate. So  
7 that's one of the main reasons why we wanted to put this  
8 proceeding together is to do all of that.

9           And I also want to express gratitude for those  
10 who worked on the Lithium Valley Commission proceeding. So  
11 that was Karen Douglas, who was a commissioner at that  
12 time, leading that effort, chair as the associate. And  
13 also Deanna Carrillo, who's the director of the division  
14 that was supporting the Lithium Valley Commission. They  
15 did a lot of work and want to uplift and honor what they  
16 did. And also, our Chief Counsel's Office was very  
17 involved as well.

18           And so we think that this could be a great way to  
19 continue that work. And it seems like a good fit for the  
20 Energy Commission to set this proceeding and bring folks  
21 together to discuss Lithium Valley, given the fact that we  
22 also supported the Lithium Valley Commission and have a lot  
23 of that institutional knowledge, you know, that we gained  
24 during that process.

25           Third, I wanted to thank Erik. He did a great

1 job presenting, really thorough information to make sure  
2 everybody's on the same page about what this is, what we're  
3 trying to do.

4           And I also want to thank him because he is the  
5 lead advisor on Lithium Valley for me, but also is really  
6 the lead on Lithium Valley, period. This is a priority  
7 policy area that lives in our office. And so Erik's been  
8 great at leading. And as you can see, or as you saw from  
9 the presentation, there is a lot of work already being done  
10 and a lot more work to do, so we're really excited about  
11 this opportunity.

12           And, Commissioners, I wanted to thank all of you  
13 for joining me out there in the Salton Sea region to get a  
14 better sense of what the place is, how dynamic and  
15 beautiful it is, and also the people, how resilient they  
16 are, and also, just getting that sense of the challenges  
17 that they go through, even with the heat; right? I took  
18 you purposely during a hot period so you could feel what  
19 they feel and get a good sense of when we're working on the  
20 policy pieces, what to think about. And also, you know,  
21 they are really stricken by poverty and pollution, one of  
22 the worst areas in the state and even in the country.

23           So I think it is imperative for us to put focus  
24 back on here and doing it through this formal proceeding  
25 may seem bureaucratic, but I think it's a good way to bring

1 in the state entities that are eager, excited, and  
2 committed to working on Lithium Valley with us.

3 And then also, to better support the local  
4 efforts that are happening, the County of Imperial is doing  
5 a lot of work to figure out a specific plan for Lithium  
6 Valley, an Investment Plan for Lithium Valley. And so  
7 we're looking forward to see those results. They're doing  
8 a lot of community engagement, as well, so we'll be able to  
9 see the input from the community on that and then hopefully  
10 be able to connect better the state and the local efforts,  
11 and then also bring in the federal support as well.

12 So I'll leave it there in case there are other  
13 Commissioners who want to discuss or ask questions, but I  
14 do think that we should support this item.

15 CHAIR HOCHSCHILD: Thank you so much,  
16 Commissioner Gallardo. Just a thunderous applause from my  
17 side.

18 Any other comments? Yeah, Commissioner Monahan,  
19 please.

20 COMMISSIONER MONAHAN: Well, first, I do want to  
21 thank all the labor stakeholders who have really emphasized  
22 this importance of local jobs, making sure those are safe  
23 jobs, durable jobs, that the money stays in Imperial  
24 County, and that there are environmental protections built  
25 in. I agree with all of those recommendations.

1           And we didn't hear today from tribal entities,  
2 but one of the tribal meetings that will stick in my mind  
3 and heart forever is meeting with the Quechan Tribe. And  
4 we had a roundtable where they talked about the impacts of  
5 mining and how they view mining from a religious and  
6 spiritual point of view, as well as just a tangible  
7 physical implications of the environment.

8           So I think there are such diverse and important  
9 interests to bring to the table as we capitalize on this  
10 great opportunity to build from, you know, we have 56  
11 vehicle EV manufacturers here in California, and we want to  
12 have not just the vehicles manufactured here, but the  
13 batteries and the lithium extracted in a way that's  
14 environmentally sustainable compared to the way it's done  
15 in the entire rest of the world. So this is a huge  
16 opportunity to keep California uplifting good jobs. As,  
17 you know, one in four new vehicles is electric, we want to  
18 keep that and we want to actually have more domestic  
19 content from here in California.

20           I also want to just give a shout out to  
21 Commissioner Gallardo. I can't imagine a better person to  
22 lead this work. And you have built such credibility with  
23 such a diverse set of stakeholders that it's unparalleled.  
24 So I just feel really in good hands with you and your team.

25           CHAIR HOCHSCHILD: Commissioner McAllister?



1           COMMISSIONER GALLARDO: May I just respond to  
2 that real quick?

3           CHAIR HOCHSCHILD: Yes.

4           COMMISSIONER GALLARDO: Thank you so much,  
5 Commissioner Monahan. I appreciate that. I don't know if  
6 I'm the best fit, but I'm going to do my best and I'm  
7 really committed to this policy priority. It's a priority,  
8 not just because it's my job but also in my heart. I feel  
9 really connected to the area now.

10           And I also want to thank all the local folks who  
11 have welcomed me, provided me information, and just, you  
12 know, really respect all that they do. Even if we're don't  
13 agree on the mechanisms for doing things, even if there's  
14 still a lot that I don't know, I just really appreciate  
15 them for receiving me and being willing to share with me.

16           CHAIR HOCHSCHILD: Commissioner McAllister?

17           COMMISSIONER MCALLISTER: Well, clearly your  
18 humility and your ability to listen are two of your biggest  
19 weapons here, so -- or tools, I guess. But I would, you  
20 know, reiterate the thanks to you and just for your  
21 leadership. Amazing job. Really enjoyed traveling down  
22 the region with you.

23           And there's a lot going on in that region. You  
24 know, Lithium Valley is not the only thing. And I think it  
25 really is a place where I think California can model and

1 sort of create an example for others of what like  
2 integrated, responsible clean energy development looks  
3 like. And certainly, the economic development piece, as  
4 everybody said, is critical.

5           And I really like the emphasis on sort of cradle-  
6 to-grave approaches so we really capture the economic  
7 development all along the whole chain from, you know,  
8 resource extraction all the way through to recycling and  
9 repurposing in support of our clean energy goals. So that  
10 could be a huge example, and I think we all understand  
11 that.

12           And there's lots going on. There are a lot of  
13 needs with housing. We visited a bunch of, you know,  
14 smaller towns, county seats, or basically sort of centers  
15 of different industries, really, that grow down, you know,  
16 agricultural and otherwise, down in the Imperial Valley.  
17 And it's just in need of a huge amount of investment and  
18 housing. SDSU is going to have a campus down there, just  
19 as you know.

20           And this synergy I think has just a lot of  
21 potential to uplift what really is already a very dynamic  
22 border region with just incredible sort of cultural  
23 exchange going on across the border. And I think it could  
24 be, over the long term with this vision that you're helping  
25 to cultivate, I think it really can drive a big sector of

1 our economy actually going forward.

2 So really looking forward to moving and assisting  
3 in that direction, so thanks.

4 CHAIR HOCHSCHILD: Go ahead, Vice Chair.

5 VICE CHAIR GUNDA: Yeah. And I just wanted to  
6 quickly add my support, Commissioner Gallardo, to your  
7 leadership style and intent.

8 And Erik, that was an excellent presentation.  
9 Thank you.

10 I want to just kind of recognize the kind of the  
11 intersection of the energy policy of the state with the  
12 industry and economic policy over the -- you know, we've  
13 always had it, but it's really coming to some critical  
14 areas, you know, three of which, you know, Lithium Valley,  
15 offshore wind, and hydrogen are kind of critical pieces  
16 that require holistic thinking beyond just the energy  
17 planning elements and requires broad, you know, stakeholder  
18 process.

19 Really appreciate the comments that were made,  
20 both in terms of the project labor agreements, the  
21 community benefit agreements, the workforce agreements, but  
22 also looking to ensure that their environmental stewardship  
23 as we continue to plan for the economic development of this  
24 region.

25 I was, you know, grateful, thankful for the visit

1 along with you, Commissioner Gallardo, to really experience  
2 the weather, the heat, but all of the stakeholder  
3 perspectives, the diverse perspectives. And I think  
4 bringing them together into a circle of trust to allow for  
5 the opportunity to come to fruition is not easy. So I  
6 just, you know, endorse and second Commissioner Monahan's  
7 point of like, you know, what you bring to the table in  
8 terms of heart and ability to listen and help collaborate  
9 on these important areas. So thank you for your  
10 leadership.

11 Erik, thank you for the presentation. I look  
12 forward to support it.

13 CHAIR HOCHSCHILD: All right. Unless there's any  
14 other comments, I would welcome a motion from Commissioner  
15 Gallardo on item six.

16 COMMISSIONER GALLARDO: Thank you. I move to  
17 approve item six.

18 CHAIR HOCHSCHILD: Is there a second from the  
19 Vice Chair?

20 VICE CHAIR GUNDA: Second.

21 CHAIR HOCHSCHILD: All in favor, say aye.  
22 Commissioner Gallardo?

23 COMMISSIONER GALLARDO: Aye.

24 CHAIR HOCHSCHILD: Vice Chair Gunda?

25 VICE CHAIR GUNDA: Aye.

1 CHAIR HOCHSCHILD: Commissioner Monahan?

2 COMMISSIONER MONAHAN: Aye.

3 CHAIR HOCHSCHILD: Commissioner McAllister?

4 COMMISSIONER MCALLISTER: Aye.

5 CHAIR HOCHSCHILD: And I vote aye as well.

6 Colleagues, with your permission, we will go  
7 ahead and jump right into item eight. I understand  
8 President Reynolds is on the line, and I believe Elliot  
9 Mainzer is here as well, so welcome to you both.

10 Let's go to Commissioner Monahan's item and  
11 welcome Heather to present.

12 MS. RAITT: Great.

13 CHAIR HOCHSCHILD: And sorry, if I could, before  
14 you speak, Heather will be retiring later this year. And I  
15 wanted to just recognize, Heather, you have been absolutely  
16 instrumental in your role at the Energy Commission with the  
17 IEPR reports for many, many years, keeping the trains  
18 running and just serving with distinction and collaboration  
19 and keeping us organized, dealing with stakeholders and  
20 workshops all over the state. And we'd like to give you a  
21 round of applause, so thank you.

22 How about that? You get a round of applause  
23 before you say anything.

24 COMMISSIONER MONAHAN: The Chair was hoping to  
25 bring you --

1 COMMISSIONER MCALLISTER: It better be good.

2 COMMISSIONER MONAHAN: -- to tears before your  
3 presentation.

4 CHAIR HOCHSCHILD: Over to you, Heather.

5 MS. RAITT: Oh, thank you so much. You're too  
6 kind. And not fair before I have to present. So anyway,  
7 but thank you. Yes, it's been wonderful. And I still have  
8 some time. So anyway, I will present the 2023 IEPR. It  
9 will probably be my last one presenting, so thank you.

10 So good morning, Chair and Commissioners. Staff  
11 is requesting your approval of the 2023 Integrated Energy  
12 Policy Report, or the 2023 IEPR for short. I'm Heather  
13 Raitt, the Director for the report. And I'm joined today  
14 by Ben Wender and Jason Orta, who also contributed.

15 Next slide, please.

16 So I'll just go over the benefits to Californians  
17 and a little background before we get into the content.

18 The Energy Commission is required by statute to  
19 assess major energy trends and issues facing the state's  
20 electricity, gas, and transportation fuel sectors. The  
21 report develops policies to advance a clean, reliable, and  
22 affordable energy system with benefits that reach all  
23 Californians.

24 Next slide, please.

25 Under Commissioner Monahan and Vice Chair Gundas'

1 leadership, Chapter 1 of the report focuses on speeding the  
2 connection of clean energy resources, which Ben Wender will  
3 present.

4 Chapter 2 is on the potential use of clean and  
5 renewable hydrogen for electricity generation and  
6 transportation, and Jason Orta will present that  
7 preliminary analysis.

8 Chapter 3 is on the California Energy Demand  
9 Forecast, which Nick Fugate will be presenting shortly, and  
10 so we won't go over that here.

11 And then we have appendices, which provide  
12 updates on other key topics, including the benefits of the  
13 Clean Transportation Program, gas decarbonization, and  
14 energy efficiency. And so given our packed agenda, we  
15 won't go over those topics, but I will just encourage folks  
16 to look at the report for more information.

17 Next slide, please.

18 The 2023 IEPR was developed in close coordination  
19 with the California Public Utilities Commission, the  
20 California Air Resources Board, and the California  
21 Independent System Operator. It further reflects input and  
22 analysis from a broad array of people and organizations  
23 engaged in the process. The CEC sought input from industry  
24 experts, the public, and sister agencies throughout the  
25 development of it, and we greatly appreciate everybody's

1 participation.

2           We held 11 workshops and one webinar. And again,  
3 I'd like to thank the workshop participants, both the  
4 panelists and the public, for their time and contributions  
5 to this report. The public had opportunities to comment on  
6 each workshop and on the draft report that was made  
7 available in November, and then again on the proposed  
8 report that was posted at the end of January.

9           The proposed report reflects changes made in  
10 response to public comments. It also includes market  
11 updates and forecast results that were not available in  
12 November. Also, an errata reflecting a few minor  
13 corrections and some edits in response to public comments  
14 was posted yesterday.

15           Finally, the Media Team developed a companion  
16 highlights document that summarizes the report findings in  
17 a beautiful format and that will be available soon.

18           Staff is requesting that you adopt the 2023 IEPR  
19 with errata docketed on February 13th, 2024. Staff also  
20 asks that you approve the staff recommendation that the  
21 report is not a project under CEQA or, in the alternative,  
22 it is deemed to be a project -- if it is deemed to be a  
23 project, that it is exempt from CEQA.

24           So with that, I will now turn it over to Ben  
25 Wender and to start our high-level summary of some of the



1 key findings of the report.

2 Next slide.

3 MR. WENDER: Well, thank you so much, Heather,  
4 and good morning, Chair and Commissioners. My name is Ben  
5 Wender. I had the real pleasure of getting to work with  
6 Heather and a larger team this year on this year's IEPR  
7 report.

8 The first year -- the first chapter focused on  
9 speeding the deployment and grid connection of clean energy  
10 resources, such as large renewable generation and storage,  
11 as well as distributed energy resources, including flexible  
12 loads like EV chargers and heat pumps.

13 Next slide, please.

14 We collaborated closely with our colleagues at  
15 the California ISO and the California Public Utilities  
16 Commission in developing this chapter, which truly reflects  
17 an all-of-California perspective. CPUC President Reynolds  
18 and her fellow commissioners, as well as CAISO President  
19 Mainzer and his colleagues collaborated with us to ensure  
20 this chapter reflects the best thinking of all of our  
21 agencies. We got many rounds of input through calls and in  
22 drafting, and I want to thank all of our partners for their  
23 time and input. I also want to thank the many stakeholders  
24 who participated in workshops, submitted written comments,  
25 and responded to my numerous requests for additional

1 information.

2           Next slide, please.

3           As you all well know, our state has established  
4 some of the world's most ambitious policies for mitigating  
5 climate change and protecting the public health of all  
6 Californians by eliminating harmful emissions from our  
7 economy. Achieving these goals now hinges on rapidly  
8 transitioning to zero-carbon renewable sources of  
9 electricity while electrifying much of the transportation  
10 and building sectors. The winter storms and summer heat  
11 waves of past years reinforce the urgency of this  
12 transition while also demonstrating the importance of  
13 enhancing the resilience of our infrastructure to climate  
14 change.

15           Collectively, we have made significant progress,  
16 but we still have a way to go in implementing these  
17 ambitious goals, as illustrated in this figure. Today, we  
18 have approximately 94,000 public and shared private EV  
19 charging stations in California but project needing more  
20 than 1 million by 2030 to charge more than 7 million EVs.  
21 That's a tenfold increase over the next seven years.

22           In the building sector, we estimate about 1.5  
23 million heat pumps have been installed, so we'll need to  
24 deploy about 4.5 million more to reach the governor's goal  
25 of 6 million by 2030. That's a fourfold increase over the

1 next seven years.

2           And in the electric sector, California already  
3 has more than 50 gigawatts of renewable generation and  
4 storage operating, but projections indicate a need for more  
5 than 200 gigawatts by 2045.

6           In this time of great implementation, we need to  
7 deploy a lot of clean resources and we need to do it  
8 quickly, while at the same time working to ensure that  
9 these deployments meet the needs of and provide benefits to  
10 disadvantaged and low-income communities up and down the  
11 state.

12           Next slide, please.

13           The first chapter is organized around several  
14 interrelated challenges that slow the pace of deployment of  
15 both grid-scale and distributed clean energy resources and  
16 their connection to the electric grid.

17           The five challenges elaborated in the chapter  
18 are, one, the pace of deployment strains existing planning  
19 paradigms, two, the growing number and size of resources  
20 overwhelm existing processes and existing infrastructure  
21 capacity, three, electricity rates must be managed while we  
22 prepare the grid, four, available grid capacity and the  
23 processes and timelines for connecting resources or  
24 performing needed upgrades are not always transparent or  
25 consistently tracked, and five, permitting takes a long

1 time and the scale of needed deployment will require  
2 broader public engagement outside of formal permitting  
3 processes.

4           These challenges have been identified before, and  
5 there are many proceedings, programs, and reforms being  
6 pursued across the state's energy entities to help address  
7 them. The chapter catalogs more than 30 ongoing efforts at  
8 the California ISO, the CPUC, and CEC across these five  
9 challenges, and then provides more than 20 recommendations  
10 that build from these ongoing efforts.

11           I'll walk through one example of an issue  
12 statement ongoing efforts to address that issue and several  
13 recommendations to illustrate the approach that we took in  
14 this chapter.

15           Next slide, please.

16           One of the key challenges we'll face in speeding  
17 the deployment of clean energy resources is managing the  
18 growing number and size of projects applying to connect to  
19 the grid. The figure on the left shows the number of  
20 internet connection applications received by the California  
21 ISO since 2009, which has more than doubled from historical  
22 norms over recent years. In 2023, the ISO received more  
23 than 500 applications to connect.

24           The data on the right was provided by Southern  
25 California Edison, which shows the number of applications

1 they have received by year to connect new EV charging  
2 projects to the distribution system they operate and it  
3 shows similar rapid growth over recent years.

4           Historical processes for intaking, studying, and  
5 connecting projects may be ill-suited to keep pace with the  
6 rapid growth recently experienced and anticipated to  
7 continue into the future.

8           Next slide, please.

9           As I noted earlier, the report describes more  
10 than 30 ongoing efforts across the state's energy entities.  
11 This slide lists several related to managing the growing  
12 number and size of projects to connect -- applying to  
13 connect at both the transmission and distribution level. I  
14 won't read through all of these, but they are described in  
15 greater detail in the chapter and reflect just a sample of  
16 the numerous efforts the state's energy entities are  
17 implementing to help us reach our goals.

18           Next slide, please.

19           Building from these ongoing efforts, the chapter  
20 provides more than 20 recommendations for further actions  
21 that can help both in the near term and in the longer term.  
22 Here I list just three that can help us manage growing  
23 numbers of larger projects.

24           The chapter recommends that utilities consider  
25 expanding use of shared or contracted resources for

1 activities such as interconnection studies, design work, or  
2 project construction that are delayed due to limited  
3 resources while being attentive to impacts on rates.

4 To help more projects connect in the near term,  
5 the chapter recommends encouraging more flexible service  
6 connections and exploring where solutions such as temporary  
7 power provided by mobile batteries or linear generators  
8 could serve as a bridging solution while permanent  
9 infrastructure is constructed.

10 And to help in the longer term, the chapter  
11 recommends undertaking a comprehensive study of workforce  
12 needs and to increase our investments in education,  
13 training, and workforce development for key roles such as  
14 power systems engineers and electricians, while  
15 prioritizing jobs in justice communities. The chapter  
16 elaborates on these recommendations as well as those to  
17 address other barriers identified.

18 Again, I want to extend my sincere thanks to my  
19 colleagues within the CEC and our collaborators across the  
20 state's energy entities who worked with us on this chapter.

21 Next slide, please.

22 Now, I'll hand it off to my colleague, Jason  
23 Orta, who will describe our work on the next chapter in the  
24 IEPR.

25 Jason, take it away.

1 MR. ORTA: Thank you, Ben.

2 Good morning, Commissioners. My name is Jason  
3 Orta, lead gas system modeler here at the California Energy  
4 Commission. I will be giving an overview of the chapter on  
5 potential growth of clean and renewable hydrogen.

6 The CEC conducted hydrogen analysis in compliance  
7 with Senate Bill 1075 by Senator Skinner, which directed  
8 the CEC to study potential growth of hydrogen to  
9 decarbonize the electric power and transportation sectors.

10 Next slide, please -- or this slide here.

11 The preliminary analysis focused on electrolytic  
12 hydrogen only -- actually, it's the next slide -- a process  
13 that uses renewable electricity to split water. For this  
14 early exploration, we wanted to use -- we wanted to see  
15 what large-scale development of electrolytic hydrogen would  
16 mean in terms of renewable resource development. This is  
17 an illustrative scenario, not intended to be predictive.

18 Staff evaluated four scenarios total, two  
19 scenarios of clean and renewable hydrogen production for  
20 electricity generation in 2045, and two for transportation  
21 in 2040. This analysis produced a high bookend of what  
22 large-scale electrolytic hydrogen production could require  
23 in terms of renewable electricity consumption and renewable  
24 generation capacity to power the electrolyzers. This slide  
25 provides an overview of some key takeaways that we want to

1 highlight.

2           For both the electricity generation and  
3 transportation sectors, we used the California Air  
4 Resources Board's 2022 Scoping Plan for the high bookend  
5 scenario. For the electricity sector, we looked at scoping  
6 plan estimates for fossil gas still being combusted in  
7 2045.

8           The scoping plan does not give an estimate for  
9 hydrogen for electricity generation, so the CEC produced an  
10 estimate of clean and renewable hydrogen needed to replace  
11 the scoping plan's 2045 gas burn. This is for electrolytic  
12 hydrogen production, 1.88 million metric tons per year of  
13 hydrogen to replace fossil gas burn in 2045, 921  
14 electrolyzers using the largest commercially available  
15 model, and about 35 gigawatts of renewable capacity for  
16 electricity to run the electrolyzers.

17           On the transportation side, the scoping plan  
18 estimates 971,000 metric tons per year of clean, renewable  
19 hydrogen by 2040 in use for multiple transportation  
20 applications, including MD/HD freight, ocean going,  
21 aviation, bus, rail, and light duty. This would require  
22 475 electrolyzers, again, the largest commercially  
23 available, and about 18 gigawatts of renewable capacity for  
24 the electrolyzers.

25           Next slide, please.



1 SB 1075 also directs CARB to conduct an extensive  
2 analysis of hydrogen potential to support California's  
3 clean energy and climate goals in consultation with the CEC  
4 and the CPUC. The CEC, excuse me, is supporting the CARB  
5 analysis, which is due in June 2024. We will build on this  
6 analysis for the 2025 IEPR. Areas we will examine for the  
7 next phase include production of clean and renewable  
8 hydrogen from biogenic feedstocks through processes such as  
9 pyrolysis, which would reduce requirements for new  
10 renewable generation, also a deeper dive on delivery and  
11 storage infrastructure. We will use the joint energy --  
12 Joint Agency, excuse me, 2025 SB 100 analysis with a 2045  
13 hydrogen scenario.

14 And if you can give me a moment to conclude this,  
15 my portion of this presentation, by thanking Heather for  
16 her leadership on this IEPR and previous IEPRs. And I  
17 wanted to bring this up because she gave me my first  
18 assignment here at the CEC 24 years ago next month when we  
19 work worked in the renewables program. So, It's been a  
20 long journey towards our clean energy future, but Heather's  
21 professionalism and kindness has always been a constant.  
22 Thank you. I just wanted to --

23 MS. RAITT: Oh, my goodness. Well, thank you,  
24 Jason, and thank you, Ben.

25 So before concluding, I'd just like to take a

1 moment to thank you, Commissioner Monahan, for your  
2 guidance and leadership on this year's report, and to the  
3 Vice Chair for his guidance and support as the Associate  
4 Commissioner.

5           And also developing the Energy Policy Report is a  
6 huge team effort. So in addition to those of us presenting  
7 today, there are many, many other staff who made important  
8 contributions from the Siting Division, from Energy  
9 Assessments Division, from the Research and Development  
10 Division, as well as, of course, the Dockets Team, Web  
11 Team, Legal Office, IT and Media. There are just too many  
12 people for me to name everyone, but there's a long  
13 acknowledgements list, and I just encourage folks to take a  
14 look there.

15           And I did want to call out a big thank you to  
16 Ben, for whom it's been my pleasure to work with on this  
17 year's IEPR report.

18           And finally, I'd like to especially thank the  
19 core IEPR team, Stephanie Bailey, Raquel Kravitz, and  
20 Denise Costa, who are just such a pleasure to work with and  
21 make everything happen from behind the scenes.

22           And as I mentioned, we work closely with our  
23 energy partners to develop the report. And my  
24 understanding is that the CPUC President Alice Reynolds and  
25 the President and CEO of the California Independent System

1 Operator, Elliot Mainzer, are available online to make some  
2 comments.

3 And before we go to that, just finally, I'd like  
4 to say staff requests that you adopt the 2023 IEPR,  
5 incorporating the changes detailed in the errata described  
6 on February 13th, 2024. Staff also asks that you approve  
7 the staff recommendation that the report is not a project  
8 under CEQA or, in the alternative, if it is deemed to be a  
9 project, it is exempt from CEQA.

10 And that concludes my presentation. Thank you so  
11 much for your kind words.

12 And in addition to staff presenting today, Renee  
13 Webster-Hawkins from the Chief Counsel's Office is  
14 available to address any questions you may have.

15 CHAIR HOCHSCHILD: All right. Thank you so much.

16 With that, we'll go to President Reynolds first,  
17 followed by Elliot Mainzer from the CAISO.

18 PRESIDENT REYNOLDS: Good morning, and thank you  
19 so much, Chair Hochschild, and good morning, Commissioners.  
20 I'm really pleased to be here with all of you, my sister  
21 agency colleagues, and it's just such an honor to have the  
22 opportunity to make comments today.

23 I'm here to provide my enthusiastic support for  
24 approval of the 2023 Integrated Energy Policy Report and  
25 the California Energy Demand Forecast. We just heard

1 really excellent staff presentations. I appreciated the  
2 detail that was provided. And I'll note that it's clear  
3 that the report reflects a great deal of extraordinary work  
4 by many staff members at the CEC and, of course, the Lead  
5 Commissioner in her office.

6 And I did want to highlight one point that you  
7 heard from the staff, and that is that how important the  
8 coordination between our agencies is, coordination between  
9 PUC and CEC, but also with CAISO and CARB. I just really  
10 value this ongoing collaboration. And it does what we  
11 expect it to do, what we all work so hard for, and that is  
12 to create positive outcomes for Californians, and you  
13 really see that here in the IEPR.

14 With respect to the chapters that we're talking  
15 about, I want to add a special thanks to Commissioner  
16 Monahan and her staff for leading the development of these  
17 chapters. They really do provide foundational knowledge  
18 and analysis for the potential developments of hydrogen and  
19 helpful considerations for how to accelerate energization  
20 and interconnection activities. And I will say that my  
21 staff and I appreciated the opportunity to contribute to  
22 this work and we look forward to seeing how it evolves.

23 I wanted to specifically note, also, that this  
24 IEPR will dovetail really well with the CPUC's three  
25 current proceedings to implement Assembly Bill 50 and

1 Senate Bill 410. So pursuant to this legislative  
2 direction, we'll be establishing timelines for  
3 energization. We'll be providing a mechanism to recover  
4 costs for this work through charges from customers in  
5 electricity bills, and we'll be developing new oversight  
6 and audit mechanisms over the process. So I'm really  
7 pleased to see this IEPR as a foundation for the work that  
8 we'll be doing at the CPUC and I look forward to  
9 coordinating with CEC staff and Commissioners on that work.

10 So I just, in conclusion, I want to really thank  
11 CEC staff and Commissioners for your hard work and your  
12 collaboration. I know how heavy a lift this is every year,  
13 but I do think that it reflects how well positioned the CEC  
14 is to move us forward to a clean energy future, and it  
15 really shows the expertise of your staff and thoughtfulness  
16 in this area.

17 So thank you so much for the opportunity to speak  
18 today. I look forward to seeing the document be adopted.  
19 Thank you very much.

20 CHAIR HOCHSCHILD: Thank you so much, President  
21 Reynolds.

22 With that, we'll go to Elliot Mainzer from the  
23 CAISO.

24 PRESIDENT MAINZER: Thank you, Chair Hochschild.  
25 I'm just trying to enable my video. I hope it's coming up

1 now. It says the host has stopped it, so if that can be  
2 released, we'll get up there. Can you hear me okay?

3 CHAIR HOCHSCHILD: Yes, we can hear you fine.

4 PRESIDENT MAINZER: Well, I'll begin speaking and  
5 hopefully they can get the video up. It's not enabling  
6 that. Apologies for that.

7 But first of all, Chair Hochschild and  
8 Commissioners, I'm pleased to be here with you, at least on  
9 audio. Hopefully the video will come up. And I just  
10 wanted to start out on behalf of all of us at the CAISO in  
11 thanking Commissioner Monahan, Vice Chair Gunda, as well as  
12 Heather and all the CEC staff for their incredible  
13 leadership in this year's IEPR. I think as always, the  
14 CEC's IEPR provides extremely valuable insight into key  
15 issues that are critical to the success of California's  
16 clean energy goals.

17 And one of the IEPR's key focuses this year was  
18 clearly accelerating the deployment of clean energy  
19 resources, which is, I think all of us know, a very timely  
20 issue that paralleled significant interconnection policy  
21 reforms underway at the CAISO this year. The 2023 IEPR  
22 report was also developed on the heels of an updated  
23 memorandum of understanding between the CAISO, the PUC, and  
24 the CEC that reaffirms our coordination on long-term  
25 planning efforts to meet California's clean energy goal.

1 President Reynolds just alluded to that. It's so  
2 important.

3 And I think all of us know it's no secret that to  
4 stay on track to meet our clean energy goals, we must work  
5 together to bring online a significant amount of new clean  
6 resources and electric infrastructure for the next decade  
7 and beyond. The CAISO very much appreciates the CEC's work  
8 in this year's IEPR to highlight challenges to new resource  
9 deployment, policy reforms underway, and offering new  
10 recommendations to accelerate clean energy resource  
11 development in California.

12 I'd like to, once again, thank the CEC staff for  
13 working seamlessly with CAISO staff to share information on  
14 interconnection processes and reflect ongoing policy work  
15 at CAISO in this report. The CAISO supports the adoption  
16 of the 2023 IEPR report and looks forward to continued  
17 collaboration with the CEC and the CPUC to advance  
18 California's clean energy goal.

19 Thank you very much.

20 CHAIR HOCHSCHILD: Thank you so much, Elliot, and  
21 we could hear you fine. Sorry we couldn't see you. I've  
22 been told when that's happened to me, I have a great face  
23 for radio, but I didn't mean to suggest that for you.  
24 Anyway, okay, by the way --

25 PRESIDENT MAINZER: Thank you. No problem.

1 CHAIR HOCHSCHILD: So --

2 PRESIDENT MAINZER: Yeah, thanks again and  
3 congratulations and really, really appreciate the work.  
4 Next time we'll -- apologies for the video, just for some  
5 reason it didn't want to enable that function this morning,  
6 but thanks again to everybody for the fabulous work.

7 CHAIR HOCHSCHILD: No, and let me just thank you  
8 and President Reynolds again for the close collaboration.  
9 And just to highlight how tough and kind of unprecedented  
10 this set of challenges we're dealing with, scaling up  
11 renewables, electrification all at once in high-heat  
12 conditions with all these new threats that we never had  
13 before, fires and droughts and all the rest, all of which  
14 have impacts on the grid. And I do want to just stress, I  
15 think the agencies are working very hard to confront these  
16 together and coordinate as never before. So my thanks to  
17 both of you.

18 With that, we'll go to -- actually, we need to do  
19 the rest of the public comment on this.

20 Let me just say, if I could, what we'd like to do  
21 is take public comment, have Commissioner discussion,  
22 conclude this item, then we'll wrap for lunch and then come  
23 back and pick up with item seven.

24 So -- I'm sorry. Yes?

25 COMMISSIONER MONAHAN: So I know President



1 Reynolds and Elliot's time is tight, so I'm not sure if  
2 they'll be able to stay for any longer. So I just want to  
3 express my personal thanks to you and your offices for all  
4 you did, especially chapter one. I mean, the collaboration  
5 runs through the entire IEPR, but we made an intentional  
6 effort this time to make this chapter a consensus document,  
7 which is tough. Anybody who's worked in a consensus  
8 environment knows that. And I just want to thank you for  
9 your leadership. And we got some tremendous ideas from  
10 your team.

11 I think Khalil Johnson is here. Khalil, are you  
12 here? Oh, stand up, Khalil. So Khalil works in President  
13 Reynolds office. And he, I know, with Ben have worked very  
14 closely on this, so just my personal thanks to you.

15 And I think this is reflective, I mean, of the SB  
16 100 report that is going to be happening this year, but we  
17 need to work together. We all know this is game time. We  
18 all know that the implementation challenges are huge, but  
19 we have a team, a cross-agency team that's working with so  
20 many, I mean, more than 30 different activities being  
21 undertaken to address these five challenges, which is  
22 tremendous. So there's so much work happening. And then  
23 having 21 recommendations that were jointly agreed upon,  
24 also, I think, gives us a platform for moving forward. So  
25 just my personal thanks to you.

1 CHAIR HOCHSCHILD: Well said.

2 With that, let's go back to public comment.

3 MS. BADIE: Hello. This is Mona Badie, the  
4 Public Advisor for the Energy Commission. The Commission  
5 now welcomes public comment on item eight. If you're  
6 joining us in the room, we're asking folks to use the QR  
7 code or visit the Public Advisor table on the back of the  
8 room. And if you're joining us on Zoom, please use the  
9 raise hand feature, it looks like an open palm on your  
10 screen. And if you're joining us by phone, press star nine  
11 to let us know you'd like to make a comment. (An  
12 electronic device chimes.) Apologize for that.

13 Okay, so we have one in-room commenter.

14 Adam Jorge, if you'd please approach the podium?  
15 Please spell your name for the record. We're asking for  
16 comments to be two minutes or less.

17 MR. JORGE: Good afternoon, Chair, Commissioners  
18 and staff. A very happy Valentine's Day to you all. I'm  
19 Adam Jorge, that's A-D-A-M J-O-R-G-E, and I'm with Southern  
20 California Gas Company.

21 So in the spirit of the day, we just wanted to  
22 offer some gratitude for everyone's work. SoCalGas  
23 appreciates the Commission's strong focus on details of  
24 California's clean energy transition and the intricacies of  
25 building out a reliable electric system for the state's

1 future. We're encouraged by CEC's acknowledgement of the  
2 growing role clean fuels will play in the energy future,  
3 clean energy future, and their use to enable  
4 electrification and uses as transmission and distribution  
5 systems are built out.

6 We appreciate the IEPR's reference to the interim  
7 use of linear generators and batteries to meet demand on a  
8 temporary basis. These technologies can also be used in  
9 microgrid applications, which improve grid reliability and  
10 may supplement needs for additional distribution resources  
11 as end uses, like buildings and transportation are  
12 electrified and decarbonized.

13 SoCalGas would also like to thank the Commission  
14 for your thoughtful approach to hydrogen demand scenarios  
15 and, generally, for everyone's extensive work developing  
16 the IEPR and supporting a transition to a clean energy  
17 future for all Californians.

18 Thank you.

19 MS. BADIE: Thank you.

20 Next, we'll hear from Katrina Fritz.

21 Katrina, I'm going to open your line. You can  
22 unmute on your end. Please spell your name for the record.  
23 We're asking for comments to be two minutes or less.

24 MS. FRITZ: Hi. Thank you. This is Katrina,  
25 K-A-T-R-I-N-A, Fritz, F-R-I-T-Z. I'm the president and CEO

1 of the California Hydrogen Business Council, the largest  
2 and longest established hydrogen trade association in the  
3 US, representing over 130 companies and organizations  
4 across the supply chain.

5 We very much appreciate the 2023 IEPR's  
6 exploration of the future role of clean and renewable  
7 hydrogen in the electric and transportation sectors, as  
8 well as effort to set the direction for future research and  
9 analysis to be conducted under the 2025 IEPR.

10 The CHBC supports the proposal in the IEPR to  
11 include hydrogen production pathways beyond electrolysis in  
12 a more comprehensive 2025 analysis, including renewable  
13 hydrogen from biogenic feedstocks. This pathway is already  
14 recognized by CARB in the legislature and consistent with  
15 the California Renewable Portfolio Standard definition of  
16 renewable hydrogen. We additionally support assessments of  
17 thermal generating facilities, reliability, safety  
18 frameworks, and pipeline infrastructure.

19 We appreciate the hyper-acknowledgement of other  
20 state and federal hydrogen initiatives and the U.S.  
21 Department of Energy selection for negotiation of a \$1.2  
22 billion award for the California ARCHES Hydrogen Hub, and  
23 we would like to see, in the future, further commission  
24 coordination of data, analyses, and policy across these  
25 initiatives.

1           We also appreciate the coordination with CARB as  
2 they build out the SB 1075 report and encourage  
3 incorporation of the vast hydrogen research and data from  
4 the U.S. DOE and national labs, as well as the U.S.  
5 Interagency Hydrogen Task Force that will inform future  
6 federal and state investments.

7           California has an urgent need to expand the  
8 concept of a minimum viable transportation network beyond  
9 freight. Commission transportation research should be  
10 conducted in coordination with California's mobile source  
11 strategy and aligned with Advanced Clean Cars II, Advanced  
12 Clean Trucks, and Advanced Clean Fleets. Alignment across  
13 the federal and state initiatives will allow California to  
14 both realize the community benefits and green jobs that can  
15 be accrued from these hydrogen investments, and also the  
16 achievement of deep economy-wide decarbonization with  
17 hydrogen supported by CARB and CEC modeling and CPUC  
18 proceedings.

19           Thank you for the opportunity to comment and we  
20 look forward to supporting the development of the 2025  
21 IEPR.

22           MS. BADIE: Thank you.

23           That concludes public comment. Back to you,  
24 Chair.

25           CHAIR HOCHSCHILD: Thank you for those comments.

1           We'll go to Commissioner discussion starting with  
2 Commissioner Monahan.

3           COMMISSIONER MONAHAN: Well, as I turn off my  
4 mic, First, of course, we have to acknowledge Heather. So  
5 Heather, this is your day. It's not going to end. And I  
6 want to liken Heather to a conductor of a musical. And  
7 each year, she's given a completely different like set of  
8 directions about what the music is going to be. One year,  
9 it's like a symphony and then the next year, it's more of a  
10 jazz rendition, and then there's some heavy metal every  
11 once in a while.

12           And then you have five different Commissioners  
13 weighing in and creating a consensus document, so it's  
14 really hard. And you navigate it so adeptly, so kindly.  
15 I've never seen you get mad. I'm sure you do. But it's  
16 got to be a frustrating and difficult process. But just  
17 you have handled it so adeptly. So Just a big thanks to  
18 you.

19           I also want to thank the Vice Chair. I mean, I  
20 came in here like needing a partner who is deep on the  
21 grid, deep on reliability, really focused on how do we make  
22 sure that we can achieve California's goals and keep the  
23 lights on. So just an amazing partner with him and his  
24 office.

25           And then, of course, Ben Wender in my office, who

1 I always like to say, like it's always good to hire people  
2 who are smarter than you, and Ben has a huge brain. He  
3 really took this on fully. He became one with the grid, he  
4 became one with the IEPR. He has birthed that baby, so it  
5 was a job.

6 And, you know, the IEPR, I want to thank the IEPR  
7 Team as well. It's a long and challenging process, but  
8 Heather has a great team with Stephanie Bailey, Raquel  
9 Kravitz, and Denise Costa helping you with this monster of  
10 a musical.

11 On the CCO side, Renee Webster-Hawkins was a key  
12 support. And then Ben for chapter one was helped out with  
13 Mark Hesters and Tom Flynn. Chapter two on the hydrogen  
14 analysis, Jennifer Campagna and Jason Orta really played  
15 critical roles. So thanks to all of them. There's other  
16 chapters. I won't go through all the folks who were  
17 involved, but lots of folks were involved in putting this  
18 together.

19 And I just want to come back to, you know, this  
20 Energy Policy Report that we call the CEC's Energy Policy  
21 Report, but really it's California's Energy Policy Report.  
22 And we tried to model that this year with this deep  
23 collaboration with the PUC and with CAISO. You know, the  
24 challenges are great and this is our moment. This is, as  
25 the Chair says, the great implementation. We have to move

1 faster.

2 I know on the EV charging side, you know, we're  
3 going to be looking at a report today that says we need 1  
4 million chargers in the light duty space by 2030, so at  
5 more than tenfold scale up in seven years, that's a lot, I  
6 mean, and so we need to just chop down those barriers  
7 together.

8 And this report is our, our best foot forward to  
9 do that. I think the SB 100 report is going to build from  
10 that, but it was a journey to pull this together. And I  
11 just can't thank enough all the folks that were involved in  
12 it, and the urgency of this moment.

13 So with that, I'll stop and turn to other  
14 Commissioners for their comments.

15 CHAIR HOCHSCHILD: Yeah, let's see, let's go to  
16 the Vice Chair.

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

18 So for those people, I just want to put it on the  
19 record that we have an internal process called the  
20 Individual Development Plan, so the IDP, you know, that we  
21 have to do it annually to make sure the staff are working  
22 well. And there's a consistent theme on Heather's that she  
23 doesn't fulfill well, which is take a compliment, so she's  
24 one of those people. And I think that is her strength,  
25 humility and kind of constantly making the report, the IEPR



1 report about the agency, about staff and supporting them  
2 with your heart. And I agree with you, I don't think I've  
3 ever seen you really burst out in anger, but I might have  
4 caused a little bit of annoyance in you multiple times.

5 But, you know, I just, Heather, when we saw the  
6 email come from you, it was like really hard to imagine CEC  
7 without you; right? You're such a such an integral part of  
8 our DNA. And Heather is kind of equivalent to IEPR. And,  
9 you know, so kind of whoever we bring in to fill your shoes  
10 will be, you know, big shoes to fill. And thank you for  
11 your years of service to the agency, to the state, you  
12 know, the people in kind of really creating the public  
13 trust in, you know, what is so important at the center of  
14 everything.

15 So thank you for your work and your team's  
16 support of you and look forward to hanging out outside of  
17 this, performing other orchestra.

18 So with that, I do want to just, you know, begin  
19 by just saying thanks to Commissioner Monahan. You know, I  
20 think she came into this year just kind of stating, you  
21 know, we have a problem implementing and what do we do?  
22 And I thought, you know, her kind of spirit of what you  
23 just said, this is a California Energy Policy Report and  
24 making sure that all the principals from different agencies  
25 were a part of the discussion and their input was taken in.

1           And as you know, we see Khalil in the back, you  
2 know, just kind of the ability to bring a forum, a process,  
3 and a venue to make that happen I think it's visionary for  
4 us. Continuing to build on your vision from this year  
5 would be, you know, something that we can drive towards as  
6 the state agency, as CAC. So thank you for all the work  
7 you've done in championing that.

8           I do want to say, there's few people that I feel  
9 you meet in life that are -- when they're given a task,  
10 they don't see anything else, and one of them is Ben. So,  
11 you know, he has not seen anything outside of IEPR this  
12 whole 24 months. And, you know, for the content that we've  
13 doubled up, if you look at the number of iterations, the  
14 PowerPoint slides that he made behind the scenes, it's  
15 probably five to six x. And just thanks, Ben, for  
16 thinking, you know, so much about how do we bring together  
17 a cohesive document.

18           I do want to extend my thanks to see CPUC and  
19 CAISO for their work, Jason, for your work on hydrogen,  
20 specifically, and I want to also uplift Aspen and Katie for  
21 her work. And I know we'll hear from Nick on the  
22 forecasting soon.

23           So in closing, I just want to reiterate, CEC's  
24 foundational role is to be an objective independent venue  
25 to tell the story of what we are doing in California, where

1 we want to go, and what are the options for it. And in  
2 doing so, we have four levers. You know, we collect data,  
3 put out trends. We do modeling and put out information on  
4 what could be. We put out money that is given to us in  
5 good faith from the legislature. And we have some  
6 regulatory elements, like the Building Codes and Standards,  
7 or permitting regime, or now the petroleum regime.

8           And I think CEC has that unique opportunity to be  
9 a statewide venue to just what I always say is ideation,  
10 ideation of the problem statement, ideation around the  
11 solution matrix, and what could be something that we could  
12 put out there. And as Commissioner Monahan mentioned, when  
13 we, you know, work with other agencies, it's really helpful  
14 because we get tempered by each other's perspective in what  
15 we want to say and how we want to say it and making sure  
16 that we provide a positive path forward.

17           I think finally, as a state agency, there is  
18 nothing more to us outside of public trust and public  
19 confidence in us being able to deliver the work we do. And  
20 that can be done only as well as our ability to listen, get  
21 the perspectives, and reflect in the reports that we write.

22           So I think, you know, Commissioner Monahan, you  
23 really embrace that vision of strong public engagement,  
24 engagement from our sister agencies, so thank you for your  
25 leadership.

1           And, Heather, I hope you do your IDD (phonetic)  
2 before you leave. And good luck with everything. And we  
3 love you here at the CEC. Thanks.

4           CHAIR HOCHSCHILD: Well said.

5           Commissioner Gallardo.

6           COMMISSIONER GALLARDO: So I'll start also by  
7 praising Heather. I can see her from here getting really  
8 shy. But, Heather, I wanted to thank you for being so  
9 gracious and graceful throughout all the process of dealing  
10 with all this and all the dynamics. And I was able to  
11 experience an IEPR with you when I was public advisor and  
12 learned a lot and just felt like we were in partnership and  
13 just really grateful for that. And on top of leading this  
14 effort, you also still volunteered for the Clean Energy  
15 Hall of Fame Awards.

16           And so I just value that love you have for the  
17 Energy Commission. You're part of our family always, even  
18 if you're trying to get away from us. So I wanted to  
19 acknowledge that, and then also highlight that you might  
20 not see direct outcomes from the work you do, but you are  
21 creating those positive outcomes for Californians that  
22 President Reynolds mentioned with your leadership on the  
23 IEPR. So I want you also to leave knowing that there's  
24 this legacy here that you have created, so thank you.

25           And then I also wanted to acknowledge what a

1 competent and powerful team we had on the IEPR and so  
2 grateful for everybody's diligence on it. And I also want  
3 to state that with, you know, Commissioner Monahan at the  
4 helm of the IEPR, I think, you know, you just show how  
5 you're willing to take on bigger projects. Your focus is  
6 transportation but you have this incredible big picture  
7 outlook and you took on and decided to do interconnection  
8 which is an area that I hear in my hearings is a priority  
9 for so many different entities and organizations and it is  
10 something we need to tackle together but very grateful to  
11 you Commissioner Monahan for, you know, leading and being  
12 willing to take that on.

13 CHAIR HOCHSCHILD: Commissioner McAllister.

14 COMMISSIONER MCALLISTER: Well, I'll just pile  
15 on, Heather. But, yeah, I've done a couple of IEPRs with  
16 you, and I think I'm very aware of how big a lift it is,  
17 and just want to congratulate Commissioner Monahan and team  
18 on a job incredibly well done.

19 But Heather, you know, I remember when you took  
20 over from Suzanne Korosec, you know, Suzanne had her own  
21 kind of brand around the IEPR. And it was a process but  
22 pretty quick one, it turned out, for you to really make the  
23 IEPR your own and really sort of give it your own special  
24 touch. And I just can't sort of emphasize, you know, too  
25 much of just how much quality you bring, you've brought to

1 the task, and just your tact, your kindness, your  
2 competence, the team around you, you just done an amazing  
3 job repeatedly, so just thank you. And we're assuming  
4 you'll come back as a retired annuitant, I believe, yeah.  
5 I'm imagining that's really not a question.

6 But also I wanted to just point out that, you  
7 know, Heather is the only person I know who kept using an  
8 iPod Touch for like five years after they went out of  
9 production, so I was super impressed by that actually. It  
10 was just really, yeah, appropriate technology.

11 And just to sort of highlight high level how  
12 important the IEPR is, I mean, really, we heard from  
13 President Reynolds, we heard from President Mainzer, the  
14 IEPR really is -- you know, for its process and its  
15 platform and its convening power and it's sort of crucible  
16 aspect of it, that's sort of a crucible, you know, really  
17 looking at the policy issues of the day, it really becomes  
18 connective tissue for all of our processes across all the  
19 state agencies that touch energy, which are, you know, more  
20 than just, you know, the CAISO, the PUC, Air Resources  
21 Board, many others, actually, depending on the issue.

22 It's really becomes a foundation for  
23 collaboration and that's how we get stuff done, right, the  
24 process. I always say the process is, is our, our  
25 lifeblood and, and the IEPR is just probably the poster

1 child for that and, really, it is a big lift but a lot of  
2 eyes get on it. And when something goes into the IEPR,  
3 it's an opportunity for folks around, you know, that  
4 particular issue or whatever's in there to point to it and  
5 say, hey, you know, California has, has, has made a  
6 statement about its policy direction, and that's really  
7 powerful.

8           So it lives on after, you know, you and your  
9 team, you know, push it out into the world. And I think  
10 each Commissioner gives it, you know, their own tenor. But  
11 I think that the continuity that provides from cycle to  
12 cycle is really critical. So really, obviously, support  
13 adoption.

14           Thanks.

15           CHAIR HOCHSCHILD: All right. Well, well said  
16 everyone.

17           Is there a motion from Commissioner Monahan on  
18 item eight?

19           COMMISSIONER MONAHAN: I move to approve item  
20 eight.

21           CHAIR HOCHSCHILD: Is there a second from the  
22 Vice Chair?

23           VICE CHAIR GUNDA: Second item eight.

24           CHAIR HOCHSCHILD: All in favor, say aye.  
25 Commissioner Monahan?

1 COMMISSIONER MONAHAN: Aye.

2 CHAIR HOCHSCHILD: Vice Chair Gunda?

3 VICE CHAIR GUNDA: Aye.

4 CHAIR HOCHSCHILD: Commissioner Gallardo?

5 COMMISSIONER GALLARDO: Aye.

6 CHAIR HOCHSCHILD: Commissioner McAllister?

7 COMMISSIONER MCALLISTER: Aye.

8 CHAIR HOCHSCHILD: And I vote aye as well.

9 Let's give Heather a round of applause.

10 VICE CHAIR GUNDA: And, Chair, I have to say I  
11 was worried if I was going to support the IEPR, but after,  
12 you know, President Reynolds and Heather, I know we have  
13 to.

14 CHAIR HOCHSCHILD: Exactly.

15 All right, we still have quite a lengthy agenda.  
16 It's 12:21. Let's reconvene here and restart at 1:15.

17 (Off the record at 12:21 p.m.)

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

19 CHAIR HOCHSCHILD: Welcome back, everyone. We  
20 are back from lunch. We will pick up where we left off and  
21 go back, if we could, to item seven, which is the  
22 California Energy Demand 2023 through 2040 Forecast of  
23 Electric and Gas Consumption.

24 We welcome Nick Fugate to present.

25 MR. FUGATE: Thank you. Good morning,



1 Commissioners -- or good afternoon, Commissioners. So I'm  
2 Nick Fugate with the Energy Assessments Division and I'm  
3 here today to propose adoption of the California Energy  
4 Demand Forecast for years 2023 to 2040. I have a brief  
5 presentation covering the purpose of the forecast, a recap  
6 of our process this year, and notable changes we've made  
7 this cycle, as well as some high-level results.

8 Next slide.

9 Demand forecasting is one of the Energy  
10 Commission's charter responsibilities. And, as such, the  
11 forecast has been incorporated into and described within  
12 the 2023 Integrated Energy Policy Report, which was just  
13 adopted.

14 Importantly, the forecast is also a critical  
15 planning tool. It lays the foundation for a number of  
16 state-sponsored planning and procurement efforts, including  
17 transmission and distribution planning, integrated resource  
18 planning, resource adequacy, and other activities aimed at  
19 keeping California's energy clean, affordable, and  
20 reliable.

21 Next slide, please.

22 We refresh the CEC's forecast every IEPR cycle.  
23 2023, though, being an odd year and a full IEPR year, our  
24 refresh was comprehensive. Here I've highlighted some  
25 notable updates.

1           We updated our economic and demographic drivers  
2 with new projections from Moody's Analytics and Department  
3 of Finance. We also extended our forecast by five years  
4 out to 2040 in order to accommodate the California ISO's  
5 longer transmission planning horizon. We re-estimated our  
6 models with additional historical load and interconnection  
7 data. New this cycle, we procured generation data for a  
8 large number of behind-the-meter PV systems, and this data  
9 gives us more insight into the historical performance of  
10 behind-the-meter PV, which is important for estimating  
11 historical consumption.

12           Ongoing research supported by the Electric  
13 Program Investment Charge, or EPIC, has delivered a suite  
14 of downscaled bias-corrected projections for climate-  
15 impacted weather statistics. In coordination with our  
16 Energy Research and Development Division and with support  
17 from multiple EPIC grant awardees, we made a substantial  
18 progress this cycle in processing those projections into  
19 forecast model inputs.

20           This cycle, we transitioned to using deep-trended  
21 temperature projections and developing forecasts of heating  
22 and cooling degree days, as well as weather normal  
23 estimates of base year consumption and peak load.

24           Also, we updated our baseline hourly consumption  
25 profile. This was in response to staff and stakeholder

1 concerns that our hourly system profiles were not closely  
2 aligned with recent historical load patterns. Relative to  
3 our previous forecast, the new profiles result in a less  
4 pronounced daily ramp and an earlier peak hour, both of  
5 which are consistent with recent observed system loads.

6 We introduced two new models this cycle. We  
7 refurbished our residential end-use model incorporating the  
8 results of the 2019 Residential Appliance Saturation  
9 Survey. We also transitioned to using a version of NREL's  
10 dGen model specific to California and also incorporating  
11 assumptions meant to reflect the CPUC's NEM successor  
12 tariff.

13 And finally, I'll note that this cycle, our  
14 planning scenario now includes additional fuel substitution  
15 that could result from Zero-Emission Appliance Standards.

16 Next slide, please.

17 The CEC seeks input into its forecast development  
18 throughout the year and through multiple venues, including  
19 public workshops and public Demand Analysis Working Group,  
20 or DAWG meetings. This is how we vet our assumptions and  
21 model inputs, propose new methods and review draft results.

22 In 2023 at a June 1st dog meeting the CEC staff  
23 outlined new data and methods to support incorporating  
24 climate change trends into the forecast. At a pair of DAWG  
25 meetings on July 31st and August 8th, we reviewed updates

1 to our transportation forecast to our distributed  
2 generation modeling and to our residential end-use model.

3 CEC staff held IEPR workshops on August 15th and  
4 18th to present key assumptions and forecast updates. At  
5 an October 26th DAWG meeting, we reviewed draft results for  
6 specific load modifiers for the residential sector and for  
7 electricity rates. And we held additional IEPR workshops  
8 on November 15th, December 6th, and December 19th to  
9 present draft results and solicit additional stakeholder  
10 feedback before the forecast was finalized.

11 We also routinely engage with the Joint Agency  
12 Steering Committee, or JASC. This is a working group  
13 intended to promote coordination between the IEPR forecast  
14 and its dependent processes at the CPUC and ISO.

15 This year, since there were quite a few updates  
16 to the forecast, we delayed adoption from January to  
17 today's February business meeting to allow additional time  
18 for stakeholder review and discussion.

19 And finally, I want to note that as a consequence  
20 of coordination with JASC, there is an agreement between  
21 leadership at the Energy Commission, the Public Utilities  
22 Commission and the California ISO, referred to as the  
23 Single Forecast Set Agreement, which describes the current  
24 commitments at each organization to use a particular  
25 combination of forecast products for specific planning

1 purposes. And for the sake of transparency, that agreement  
2 has been updated and is memorialized within the forecast  
3 chapter of the 2023 IEPR.

4 Next slide, please.

5 I have just a handful of charts showing high-  
6 level results of the 2023 IEPR forecast. This plot  
7 compares our forecast of statewide electricity sales across  
8 two vintages, the 2022 IEPR update versus the 2023 IEPR  
9 being considered today for adoption, and also across two  
10 scenarios, the planning forecast and the local reliability  
11 scenario.

12 Our scenario framework is similar to last cycle's  
13 with the planning scenario representing mid-range  
14 assumptions suitable for system-level planning, things like  
15 resource adequacy or the CPUC's Integrated Resource Plan  
16 and then the local reliability scenario, which errs on the  
17 side of higher electric load growth, so less efficiency,  
18 more fuel substitution. And this is used for local studies  
19 such as local area reliability studies within the ISO's  
20 transmission planning process. Again, the use cases are  
21 documented in detail within the text of the IEPR.

22 And examining the chart here, we see that our  
23 2023 IEPR forecast begins from a lower point than  
24 previously forecast. Growth is lower due to a combination  
25 of factors, notably lower population and household

1 projections, higher electricity rates, and higher behind-  
2 the-meter PV adoption.

3           You'll notice the spread between the planning and  
4 local reliability scenarios is much narrower this cycle  
5 relative to last and that, despite the lower starting point  
6 in initial growth, the planning scenario reaches a higher  
7 level by 2035 than previously forecast. And this is a  
8 consequence of the planning scenario now considering the  
9 potential impacts of Air Resources Board Zero-Emission  
10 Appliance Standards. And by 2040, the planning forecast  
11 reaches more than 352 terawatt hours.

12           Next slide, please. I think we -- can we back  
13 up one? Okay, I seem to be missing a slide. Can we maybe  
14 advance two? There should be -- yeah, okay, let's do this  
15 one and then I'll back up.

16           So this plot shows our annual peak forecast for  
17 the CAISO control area and for the same vintages and  
18 scenarios I discussed on the previous slide. Both planning  
19 and local reliability scenarios begin from a weather  
20 normalized estimate of 2023 peak load, which is lower than  
21 our previous forecast value.

22           The story is similar to the sales forecast. The  
23 peak is driven by our underlying annual consumption  
24 forecast, which is lower than last cycle's. As I mentioned  
25 earlier, we also reestimated our hourly consumption

1 profile, resulting in a lower coincidence during the one  
2 and two peak conditions, as well as an earlier system peak  
3 hour. The earlier peak hour, which we feel is reasonable  
4 in the context of recent historical peaks, means that PV  
5 adoption has a greater peak reduction effect in the initial  
6 years of the forecast.

7 As with the sales forecast, the inclusion of  
8 Zero-Emission Appliance Standards means that by 2035, the  
9 new planning forecast exceeds last cycles. The CAISO peak  
10 is projected to exceed 63,000 megawatts by 2040.

11 And let's back up one slide.

12 So finally, here's our statewide end use gas  
13 consumption forecast, end use meaning that this does not  
14 include gas for electricity generation. Unlike our  
15 electricity forecast, our gas forecast is updated only  
16 every two years with each full IEPR cycle.

17 The gas utilities generally have used their own  
18 forecast for gas system planning, though they have included  
19 some components of the CEC's forecast, such as additional  
20 achievable energy efficiency and fuel substitution  
21 scenarios, at their own discretion. The planning and local  
22 reliability scenarios were developed with electricity  
23 system, infrastructure, and reliability planning in mind.  
24 Gas system planning has to consider a different set of  
25 risks, though, and so caution should be exercised in the

1 construction of managed scenarios.

2 I'm not presenting these scenarios as a system  
3 planning recommendation, but rather to illustrate the  
4 substantial reductions in gas demand that could occur by  
5 2040 as a result of the state's ambitious building  
6 electrification goals. The planning and local reliability  
7 scenarios, for example, could reduce end-user gas  
8 consumption in 2040 by nearly 4,400 million therms.

9 And let's advance two slides.

10 So what I've shown today are high-level results.  
11 As I mentioned earlier, various components of the forecast  
12 were presented and discussed in much greater detail at  
13 various workshops throughout the year and documented within  
14 the text of the IEPR itself. Draft forecast results were  
15 presented in December of last year, and final results were  
16 docketed in January. They have been posted to the IEPR  
17 website as well.

18 I do want to thank CEC staff and contractors for  
19 all of their hard work this year to update and improve so  
20 many elements of the forecast. And as always, a special  
21 thanks to Heather and the IEPR team for their unwavering  
22 support. I also want to thank stakeholders for their  
23 engagement and input over the course of the cycle.

24 Before concluding, though, I should acknowledge  
25 some discussion CEC staff have had with stakeholders very



1 recently following our December results workshop.

2           For context, our Electricity Demand Forecast has  
3 generally been increasing each year relative to the  
4 previous vintage as we've added more and more  
5 electrification impacts. And in fact, in the long term,  
6 that is still the case with our planning forecast being  
7 higher than last cycle. But for the first time in several  
8 years, we have a decline in our near-term peak projections  
9 relative to the previous adopted forecast.

10           Within the JASC forum, staff at the CEC, CPUC,  
11 and California ISO have had several discussions around the  
12 implications of a lower forecast on system planning. These  
13 discussions have coalesced around resource adequacy  
14 specifically and strategies to ensure that California  
15 remains well-suited to meet demand under extreme weather  
16 conditions.

17           Staff at the CEC, CPUC, and CAISO will be  
18 monitoring both system demand and supply conditions through  
19 2024 and into 2025. More specifically, staff will continue  
20 to analyze PV performance and interconnection rates,  
21 analyze actual system loads, and work on key elements of  
22 the CEC's forecast, such as the hourly load model. And  
23 these can provide an early indication if demand trends are  
24 deviating from the 2023 forecast.

25           Staff at the CEC, CPUC, and CAISO will also track

1 a number of supply-side metrics through 2024, such as fleet  
2 outage rates, resource adequacy, and import contracting  
3 trends, progress of new resource development, and hydro  
4 conditions for any signs that net demand slash supply  
5 balance may be tighter than expected.

6 And staff will also monitor the performance and  
7 availability of strategic reserves, the Emergency Load  
8 Reduction Program, pump load reduction capability, and  
9 other contingency resources.

10 These efforts are intended to provide early  
11 indication in the event that additional interventions are  
12 warranted to meet any potential risks or shortfalls  
13 identified for 2025.

14 I also want to acknowledge some discussions we  
15 have had with the utilities in just the recent weeks. We  
16 have had multiple exchanges with staff from both Southern  
17 California Edison and San Diego Gas and Electric, digging  
18 into some of our forecast assumptions and results in  
19 greater detail. These discussions have centered around  
20 disparities in our respective outlooks, either the general  
21 trajectory of the forecast or, in some cases, their  
22 specific components. These conversations have been really  
23 helpful in identifying areas of continued focus and  
24 improvement, and we certainly look forward to continuing  
25 this collaboration into this next forecast update cycle.

1           And lastly, I want to acknowledge some  
2 discussions we've had with stakeholders regarding data  
3 center load growth. While we have adjusted our PG&E  
4 planning area forecast to account for several large known  
5 projects in the Bay Area, staff feel that this subject  
6 warrants further attention in the coming update cycle.

7           And everything considered, staff feel that the  
8 forecast is reasonable. Adoption of the forecast today  
9 will ensure that dependent planning processes at the CPUC  
10 and ISO can proceed without critical delays.

11           And so with that, I will conclude by recommending  
12 that the Commission adopt the California Energy Demand 2023  
13 to 2040 Forecast.

14           CHAIR HOCHSCHILD: Thank you so much.

15           CHAIR HOCHSCHILD: Let's go to public comment.

16           MS. BADIE: Chair, I believe we have Leuwam  
17 Tesfai from CPUC on the line that would like to make some  
18 remarks before we open it for public comment.

19           CHAIR HOCHSCHILD: Great, let's do that.

20           MS. TESFAI: Good afternoon, Commissioners and  
21 Chair Hochschild. Thank you so much for the opportunity to  
22 join you all for this meeting and make a few public  
23 comments. My name is Leuwam Tesfai and I'm the Deputy  
24 Executive Director for Energy and Climate Policy at the  
25 Public Utilities Commission.

1           To start, I wanted to reiterate again why  
2 coordination between the Public Utilities Commission and  
3 the Energy Commission and the California ISO is so  
4 important here and really affirm the CPUC's ongoing  
5 commitment to close coordination with our sister agencies  
6 via the Joint Agency Steering Committee, or the JASC.

7           The Demand Forecast is an upstream process that  
8 informs a number of critical downstream processes at the  
9 California Public Utilities Commission, such as our general  
10 rate cases, integrated resource planning, distribution  
11 planning, as well as resource adequacy. We acknowledge the  
12 notable difference in the 2023 forecast compared to the  
13 previous vintage.

14           And at the Public Utilities Commission, we will  
15 monitor the impacts of this year's IEPR Demand Forecast on  
16 our various activities that we oversee. And we know that  
17 we have a number of tools available at the CPUC through our  
18 proceedings to manage any potential undesired impacts. And  
19 we will also continue to leverage the JASC as a key  
20 coordination venue for this ongoing work.

21           In conclusion, I wanted to thank the CEC staff  
22 and Commissioners for all of your hard work and  
23 collaboration on this process. Our Energy Division staff  
24 take our collaboration very seriously, and we recognize the  
25 important interconnectedness of our agencies.

1           So thanks again for having me today and the  
2 opportunity to make a few comments on the Demand Forecast.

3           CHAIR HOCHSCHILD: Thank you so much, Leuwam.

4           Let's go to public comment on item seven.

5           MS. BADIE: Sorry, Chair, I also have Christy  
6 Sanada from CAISO in the room?

7           Christy, I don't know if you want to make some  
8 remarks at the podium before we open it to public comment?

9           CHAIR HOCHSCHILD: Great.

10          MS. SANADA: Hi. Good afternoon, Commissioners.  
11 My name is Christy Sanada, and I'm speaking on behalf of  
12 the California Independent System Operator, or CAISO.

13          The CAISO supports the adoption of the 2023  
14 California Energy Demand Forecast. The CEC's Demand  
15 Forecast is really a cornerstone of coordinated long-term  
16 planning processes across the state. The CEC forecast is a  
17 key input into several downstream processes as was already  
18 discussed, including CAISO's local and flexible resource  
19 adequacy studies, the CAISO's transmission planning  
20 process, and the CPUC's IRP, which feeds into our  
21 transmission planning process.

22          The CAISO recognizes that the CEC's Demand  
23 Forecast is becoming increasingly complex as the CEC  
24 incorporates the impacts of electrification in several  
25 sectors of the economy, the impacts of an increasing amount

1 of behind-the-meter resources on demand, and takes on  
2 countless other enhancements and tweaks to the forecast  
3 each and every year. Thus, the CAISO greatly appreciates  
4 the efforts and the significant time that the CEC staff  
5 spends working on the Demand Forecast year-round and the  
6 close coordination among CEC, the CAISO, and the CPUC in  
7 developing the Demand Forecast each cycle.

8 I do want to highlight that in this cycle we  
9 appreciate very much the CEC's inclusion of updated behind-  
10 the-meter solar data, which will help align forecasted load  
11 profiles, align with observed actuals. This is something  
12 that we've supported for quite some time and this, in turn,  
13 will enhance our flexible resource adequacy studies.

14 We do recognize as well that there are concerns  
15 around the drop in the peak coincident demands forecasted  
16 in the nearer-term years in the RA horizon. So, in light  
17 of this, as Nick alluded to and as Leuwam just mentioned,  
18 the CAISO commits to work closely with the CEC and the CPUC  
19 to monitor various demand and supply metrics as we approach  
20 2025 and to help us identify any potential mitigations if  
21 needed to ensure reliability in these near term years.

22 We also look forward to continuing to collaborate  
23 closely with the CEC, the CPUC, load-serving entities, and  
24 industry throughout 2024 to review and revisit forecast  
25 assumptions for the 2024 forecast cycle.

1           So in closing, the CAISO supports the adoption of  
2 the 2023 California Energy Demand Forecast. And again,  
3 want to thank the CEC and CEC staff for their continued  
4 collaboration on this very critical work. Thank you.

5           MS. BADIE: Thank you.

6           The Energy Commission now welcomes public comment  
7 on item seven. If you're joining us in the room, we ask  
8 that you use the QR code. I'll also take a show of hands.  
9 And if you're joining us by Zoom, please use the open-palm  
10 symbol on your screen to raise your hand. And if you're  
11 joining by phone, press star nine.

12           So in the room, we have Sarah Taheri.

13           If you want to approach the podium, Sarah, please  
14 spell your name for the record. And then we're asking for  
15 comments to be two minutes or less. There will be a timer  
16 on the screen. Thank you.

17           MS. TAHERI: Great. Thank you. Good afternoon  
18 Commissioners. Sarah Taheri, it's S-A-R-A-H T-A-H-E-R-I,  
19 and I am with San Diego Gas and Electric.

20           First, just wanted to extend gratitude for all of  
21 the hard work that the Commission has done on this  
22 forecast. We know it is indeed a complex effort and a lot  
23 of conversations have happened on this as you've heard from  
24 staff. We really appreciate staff's responsiveness to  
25 answering all of our questions, taking meeting requests,

1 and continuing to deep dive on the information in the  
2 forecast.

3           And today we just wanted to share with you some  
4 of our initial observations. I think some of it will be  
5 consistent with what you've heard with staff here, but just  
6 to put a finer point on what SDG&E is seeing specifically  
7 for our region.

8           So while we're continuing to evaluate the data  
9 that's been released thus far, what we're seeing is that  
10 the Peak Load Forecast and the Natural Energy Sales  
11 Forecast in SDG&E's service area are significantly lower  
12 than we were anticipating. And as you saw in the graph  
13 that was shown in staff's presentation, it's lower than the  
14 '23 forecast until you get to a certain period of time --  
15 Excuse me, it's lower than the '22 forecast. And it's also  
16 lower than SDG&E's own forecast.

17           To put a little more perspective on this, the  
18 magnitude that we're seeing in potential differential here  
19 gets up to approximately 500 megawatts of difference in  
20 peak load, which is what's causing our concern in our  
21 comments here today. That 500 megawatt difference is  
22 equivalent to about ten percent of SDG&E's peak load.

23           And so we'd very much like to continue  
24 discussions with staff on this and with the JASC, I heard  
25 commitments from the other agencies as well, just to



1 explore and better understand what's driving these  
2 differences so that we can make sure that we are all on the  
3 same page as far as how these feed into very critical  
4 proceedings of resource adequacy, integrated resource  
5 planning, distribution grid planning, and transmission  
6 planning, among others.

7           And as we look at the impacts of this forecast,  
8 we recognize that our customers are expecting reliable  
9 infrastructure to be available when they need it. So we  
10 are very much looking forward to continuing conversations  
11 here and working with the Commission both to continue  
12 assessment of risk here with the current forecast and then  
13 as well going forward for future forecasts.

14           Again, appreciative of staff's work on this and  
15 appreciate your consideration of these comments. Thank  
16 you.

17           MS. BADIE: Thank you.

18           Next, we'll hear from Dawn Anaiscourt.

19           Dawn, if you want to approach the podium, please  
20 spell your name for the record before beginning your  
21 comments. We're asking for comments to be two minutes or  
22 less. There will be a timer on the screen. Thank you.

23           MS. ANAISCOURT: Thank you. Good afternoon,  
24 Commissioners. My name is Dawn Anaiscourt, D-A-W-N,  
25 Anaiscourt is A-N-A-I-S-C-O-U-R-T, and I'm speaking on

1 behalf of Southern California Edison.

2 Edison acknowledges and appreciates that the CEC  
3 has introduced significant modeling changes in this IEPR  
4 cycle while managing challenging timelines for IEPR  
5 forecast adoption. SCE understands the increasing  
6 complexity involved with expanded data sets and new models  
7 that are being introduced.

8 Upon close examination of the 2023 IEPR forecast  
9 changes, and the details behind some of the key drivers of  
10 the forecast, we've identified some initial concerns with  
11 the forecast results.

12 First, we've noticed a declining Annual Peak  
13 Demand Forecast for SCE's Transmission Access Charge, or  
14 TAC, area. This is contrary to our own forecasts and it  
15 does not return to the 2023 level until after 2031.

16 Second, what we assess to be an overly aggressive  
17 solar PV forecast for SCE's territory that reflects a  
18 higher annual PV capacity expansion for the years 2025 to  
19 2032. That is well above the average annual PV capacity  
20 growth that we experienced in the most recent three to five  
21 years prior to the net billing tariff impact becoming  
22 effective in 2023. So that, we expect it to be more of the  
23 peak.

24 We really appreciate the collaboration that we've  
25 seen with the CEC staff. However, we think it's imperative

1 that the parties continue to discuss and vet the changes  
2 that we're seeing, and also to develop a comprehensive and  
3 perhaps common understanding of how the IEPR forecast is  
4 going to impact long-term, short-term, and short-term  
5 distribution planning, transmission planning, and  
6 reliability planning, both at a state level and at an LSE  
7 level, in addition to what the impacts will be on  
8 California customers if we don't get this reasonably right.  
9 I think really critical, just looking out for that.

10 So like our counterparts at SDG&E, we would  
11 appreciate the collaboration as we continue to look at and  
12 vet these results. Thank you.

13 MS. BADIE: Thank you.

14 We'll transition over to the Zoom commenters.

15 Telephone ending in 385. I'm going to open your  
16 line if you could please state and spell your name for the  
17 record. We're asking for comments to be two minutes or  
18 less.

19 MR. UHLER: Hello, Commissioners. This is Steve  
20 Uhler, that's U-H-L-E-R.

21 I'm finding similar results as the two Southern  
22 California utilities are noticing. One of the things that  
23 was surprising after a talk of using historical data for  
24 behind-the-meter PV, I'm not finding it in the data set.  
25 I'm finding just kind of, you know, sets of four same

1 curves, same curve, you know, for four days, and then a  
2 little higher or a little lower curve, but nothing that  
3 would point to a situation that might -- they might have to  
4 deal with dealing with behind-the-meter PV. Of course,  
5 maybe they're figuring that there will be a lot of  
6 curtailment of behind-the-meter PV in order to keep their  
7 grids in good shape.

8 I'm also surprised that last night or yesterday,  
9 a new balancing authority table set was put out, yet no  
10 other changes to any other tables. Now, I look at this  
11 whole thing like Balancing if there's a demand you've got  
12 to be figuring out what the balancing authority you're  
13 going to do to meet that.

14 I'm concerned about that what's a very concerned  
15 about why in this day and age where there's ai or si or  
16 whatever various types of computing systems, that were not  
17 doing five-minute times because they have five-minute  
18 pricing on power. I'll be putting together some samples of  
19 what that would look like and how that would simplify and  
20 clarify. I spent 40 years in manufacturing engineering and  
21 there's a lot of tools that are being left on the table  
22 here.

23 So, yeah, you'll probably vote for this just as  
24 you voted for the RPS procurement requirements, but based  
25 upon the RPS requirements, I'm finding data errors in that

1 system as well. So expect me to come up with some stuff  
2 for you to consider on this IEPR.

3 Thank you.

4 MS. BADIE: Thank you for your comment.

5 That concludes public comment. Back to you,  
6 Chair.

7 CHAIR HOCHSCHILD: Let's go to Commissioner  
8 discussion, starting with the Vice Chair.

9 VICE CHAIR GUNDA: Thank you, Chair.

10 Nick, thank you for the presentation. Dawn and  
11 Sarah, thank you for those comments, as well as Leuwam.

12 And, Christy, I just want to first kind of extend  
13 my gratitude to the entire team. You know, I just spoke to  
14 Christy during the lunch break. Christy, you've been a  
15 tremendous addition to the team at CAISO, just kind of  
16 running through the process and, you know, helping foster  
17 that continued collaboration between PUC, CAISO, and CEC on  
18 this important product. So thank you for your work.

19 I want to recognize Simon Baker, who is the lead  
20 staff from PUC, who serves on the JASC, and Nick, as well  
21 as Heidi, David Erne, as well as Aleecia from CEC, so thank  
22 you all for all the work, and Commissioner McAllister's  
23 Office for his guidance, as well, on some of our planning  
24 tools.

25 I wanted to kind of just ask a quick question,

1 Nick, on your initial responses as you spoke to colleagues  
2 from SCE and SDG&E. Anything that stands out in terms of  
3 modeling, things that you need to watch out for?

4 MR. FUGATE: Yes, so there are a number of, you  
5 know, points that both SDG&E and Southern California  
6 Anderson have raised that we feel are, you know, reasonable  
7 points to continue investigating on the PV adoption  
8 projections. You know, this is a very challenging time.  
9 We're moving into this, you know, sort of period after the  
10 transition to the NEM successor tariff. There's a lot of  
11 uncertainty there, so that's something we are wanting to  
12 monitor very closely.

13 And then also, SCE also raised that their  
14 forecasting raised some points about our assumptions in  
15 total market potential that we think are also worth looking  
16 into. So definitely there are things to dig into there, so  
17 we're looking forward to those discussions.

18 And then I think in response to San Diego Gas and  
19 Electric, you know, they shared their outlook with us,  
20 agree it differs in trajectory. I will note that of the  
21 500 megawatt difference, 250 of that is the initial  
22 starting point. So there's some alignment issue there that  
23 needs to be understood before we really understand the  
24 magnitude of the difference there. But again, we've shared  
25 data with SDG&E and are eager to continue those discussions

1 to figure out what that -- what is driving that difference.

2 VICE CHAIR GUNDA: So just for the benefit of the  
3 record, Nick, can you just kind of amplify a little bit on  
4 the initial difference, the starting point difference for  
5 the record where it's coming from, even for our previous  
6 vintages?

7 MR. FUGATE: I can't speak to that directly  
8 because the -- so our forecast starting point is actually  
9 very close to what our previous forecast was projecting.  
10 So there hasn't been a lot of movement on our end. It was  
11 sort of surprising to us to see San Diego's forecast jump  
12 pretty significantly from their previous forecast to their  
13 new 2023 starting point. So we will need to have some  
14 discussion with their team to understand what caused --  
15 what prompted that increase.

16 VICE CHAIR GUNDA: Also, just I think it's worth  
17 for the record to talk a little bit about the shape of the  
18 consumption forecast over the next several years given the  
19 updation to the population and the demographic data and the  
20 implication of that on the peak.

21 MR. FUGATE: I'm sorry, can you --

22 VICE CHAIR GUNDA: And the implication of that  
23 shape on the on the peak forecast itself.

24 MR. FUGATE: The implication of the kind of  
25 changes to the consumption profile?

1           VICE CHAIR GUNDA: Yeah.

2           MR. FUGATE: Yeah, so we have reestimated our  
3 consumption profile using sort of a more recent historical  
4 system load data, plus the PV data that I discussed  
5 earlier. You know, there is something that we have to  
6 create, a counterfactual load history there, and there are  
7 other -- some adjustments that we make to account for  
8 things like supply-side demand response programs that, you  
9 know, have an impact on system load. So that's kind of our  
10 starting point.

11           Our previous consumption profile was using a much  
12 older set of historical system loads to estimate the  
13 models. And so, you know, there has been something of a  
14 staleness to our consumption profile for the last few  
15 cycles that has been pushing the, as we add more PV, it has  
16 been pushing the peak, system peak hour in our forecast  
17 very late in the evening. The ISO was peaking at hour 19  
18 in our forecast, which we have not seen that yet.

19           So these new consumption profiles have kind of  
20 realigned that peak hour with sort of recent history, but  
21 as a consequence, and this is particularly the case with  
22 Southern California Edison, which is the earliest of the  
23 peak hours, there's a greater contribution from increased  
24 adoption of PV. So as with Southern California Edison's  
25 territory in particular, the increased PV projections, plus



1 the earlier peak hour, is what is driving that kind of  
2 decline in the near term.

3 And so certainly agree that this is something we  
4 want to continue to make sure we're getting right.

5 VICE CHAIR GUNDA: Thanks, Nick.

6 So just from my vantage point, I think, you know,  
7 I mentioned it to a couple of colleagues that I discussed,  
8 you know, my initial, you know, reaction in our meeting  
9 when you showed the forecast was also kind of that  
10 immediate concern of what happened in 2020 and the  
11 shortfalls we've had. But I am persuaded by, you know, the  
12 modeling improvements, the significant, updates that have  
13 been done both to the weather and the PV, but also  
14 recognize the uncertainties that it introduces into the  
15 modeling. And I want to be humble about it as an agency,  
16 think through. You know, a forecast is a forecast. And  
17 there's a lot of elements that we have to navigate in terms  
18 of mitigating the risk to the system.

19 So I just want to recognize the incredible work  
20 that you and the team have done in really taking the input  
21 from PUC and CAISO and a number of our stakeholders to  
22 improve. But I also recognize that, you know, in making  
23 those improvements, we don't have history behind us on how  
24 good those modeling improvements are.

25 So I also want to recognize that we've talked

1 through some contingencies, specifically if, you know, the  
2 forecast were to significantly differ this year, and we  
3 observe as we go, we have tools, whether it's the strategic  
4 reserve, whether it's extraordinary situation and something  
5 like a CPM if we need from CAISO. So I feel like we have  
6 enough tools to manage potential risk introduced and  
7 uncertainty introduced in the process.

8           So having said that, I really value the  
9 collaboration with our IOU partners, the competence and  
10 collaboration they bring to the table. So I want to make  
11 sure that we don't leave anything unturned, make sure we  
12 understand the causal factors behind the deviation, and  
13 continue to improve our forecast.

14           And again, in closing, I will support. I feel  
15 comfortable supporting it, knowing both that the  
16 improvements made are needed improvements, it kind of  
17 actually aligns with the ramping as well as the hour system  
18 peak hour well, but also kind of created certain other  
19 issues. So I recognize that, but I'm happy to support.

20           And one more time, commend Nick, particularly  
21 you, given the forecasting team and the downsizing of the  
22 team over the last few years, and you had two things to do,  
23 both hold the forecasting work, but also, you know, create  
24 the team, you know, train them along with Heidi. So just  
25 want to say to you and Heidi, thank you for the work. I

1 look forward to supporting the adoption.

2 CHAIR HOCHSCHILD: So colleagues, we're at two  
3 o'clock, and we're actually still pretty early in the  
4 agenda, and we have a closed session. So just going  
5 forward, if we could try to make every effort to move  
6 expeditiously, other than the lead Commissioner on each  
7 item. I don't want to hold anybody back, but if you don't  
8 have anything burning to say --

9 COMMISSIONER MONAHAN: I just want to say that  
10 these are all transportation items, so ouch. Okay.

11 CHAIR HOCHSCHILD: Sorry. But unless there's  
12 burning comments to make, I would welcome a motion. Are  
13 there burning comments?

14 COMMISSIONER MONAHAN: I'm going to be very fast.

15 CHAIR HOCHSCHILD: Yeah.

16 COMMISSIONER MONAHAN: -- spiffy.

17 But I just want to say, I think this is an area  
18 of intense curiosity for all of us. And as you learn more  
19 about the conversations through the JASC with the IOUs, if  
20 you could report back, I think that'd be really helpful.  
21 And especially this whole, you know, solar adoption curve,  
22 given kind of this unknown, uncharted territory that the  
23 model is taking.

24 CHAIR HOCHSCHILD: Let's --

25 COMMISSIONER MCALLISTER: Yeah, just really

1 quick.

2           So thanks, Nick, really appreciate that. And  
3 thanks for the description of all the changes.

4           And I did want to just -- well, later, not here,  
5 not now, I know we're kind of pressed on time, but I do  
6 want to sort of dig more into the weather, the sort of  
7 detrending of the weather and sort of trying to embrace,  
8 you know, what we think the weather is going to be in the  
9 future and not rely on past weather. And we're having a  
10 similar conversation in the Building Standards Team. So  
11 just want to make sure we're connecting those dots, so  
12 appreciate your focusing on that.

13           And, yeah, I'll leave it there for now, but  
14 thanks. Really appreciate the --

15           CHAIR HOCHSCHILD: Unless there's further  
16 discussion, welcome a motion on item seven from the Vice  
17 Chair.

18           VICE CHAIR GUNDA: Thank you, Chair. One quick  
19 piece.

20           I just want to say, Dawn and Sarah and your  
21 teams, you know, I really welcome the collaboration. Make  
22 sure that we are connected.

23           And with that, I'll move item seven.

24           CHAIR HOCHSCHILD: Is there a second from  
25 Commissioner Monahan?

1 COMMISSIONER MONAHAN: I second.

2 CHAIR HOCHSCHILD: All in favor, say aye.

3 CHAIR HOCHSCHILD: Vice Chair, Gunda?

4 VICE CHAIR GUNDA: Aye.

5 CHAIR HOCHSCHILD: Commissioner Monahan?

6 COMMISSIONER MONAHAN: Aye.

7 CHAIR HOCHSCHILD: Commissioner Gallardo?

8 COMMISSIONER GALLARDO: Aye.

9 CHAIR HOCHSCHILD: Commissioner McAllister?

10 COMMISSIONER MCALLISTER: Aye.

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

13 We'll turn now to item nine, CalCERTS Application  
14 to Register Low-rise Multifamily Projects for 2022 Energy  
15 Code Compliance.

16 Welcome Armando Ramirez to present.

17 MR. RAMIREZ: Good afternoon Chair, Vice Chair,  
18 Commissioner. My name is Armando Ramirez. I'm a  
19 mechanical engineer in the Efficiency Division.

20 Next slide.

21 I'm presenting the CalCERTS application to modify  
22 its data registry.

23 But first, how would today's approval benefit  
24 Californians?

25 Multifamily building projects, such as new

1 building construction and space conditioning changeouts,  
2 require permits and demonstration of compliance with the  
3 Building Energy Efficiency Standards, or Energy Code.

4 Buildings having fewer than four habitable  
5 floors, such projects are documented on a residential data  
6 registry, and compliance is demonstrated through the  
7 process of field verification and diagnostic testing, or  
8 FV&DT. And the Home Energy Rating System, or HERS, program  
9 provides a way to train and oversee raters who conduct  
10 FBNDT and rate measures compliance with the code, which in  
11 turn ensures quality of installation. And these activities  
12 effectively protect consumers and support the state's  
13 decarbonization goal.

14 Okay, next slide.

15 A bit more background, the residential data  
16 registry must be owned and operated by a HERS provider.  
17 Now, both the HERS and Energy Code regulations have  
18 distinct requirements for handling applications and  
19 approvals, but in either case, the executive director must  
20 recommend approval to the Commission. This recommendation  
21 was made on January 17, 2024 and shared with CalCERTS on  
22 the next day. It is also available on Docket Log  
23 22-HERS-01.

24 Next slide.

25 Here's some background for the present item.

1           In December of 2022, the CalCERTS registry was  
2 approved to register 2022 Energy Code documents for  
3 demonstrating compliance in single-family and  
4 nonresidential buildings, but not in low-rise multifamily  
5 buildings. CalCERTS was also recertified as a California  
6 HERS provider to train, recertify, and oversee riders for  
7 field verification and diagnostic testing under the '22  
8 Energy Code.

9           This June 2023 application addresses the  
10 incorporation of low-rise multifamily documentation that  
11 was not available when the Energy Code became effective on  
12 January 1, 2023.

13           Next slide.

14           Staff respectfully request the Commission approve  
15 the executive director recommendation to recertify CalCERTS  
16 as a HRS provider for the 2022 Energy Code, which would  
17 authorize CalCERTS to implement updated radar instructions  
18 and manuals, and to approve the CalCERTS application to  
19 modify its residential data registry to incorporate low-  
20 rise multifamily compliance documentation.

21           And this concludes my presentation. Michael  
22 Merza from the chief counsel's office and I are available  
23 for any questions. Thank you.

24           CHAIR HOCHSCHILD: Thank you.

25           Let's go to public comment on item nine.

1 MS. BADIE: Hello, this is Mona Badie again with  
2 the California Energy Commission Public Advisors Office.  
3 The Commission welcomes public comment on item nine at this  
4 time. If you're joining us in the room, we're asking folks  
5 to use the QR code to let us know. And if you're joining  
6 by Zoom, please click on the raise-hand/open-palm icon and  
7 if you're joining by phone press star nine.

8 All right, Shelby Gatlin is joining us in the  
9 room. Shelby, if you want to approach the podium please  
10 spell your name for the record and we're asking for  
11 comments to be two minutes or less.

12 MS. GATLIN: I'm Shelby Gatlin, S-H-E-L-B-Y  
13 G-A-T-L-I-N. I'm with CalCERTS. Thank you.

14 Thank you for all the work Armando and your team  
15 have done. We've worked with Che (phonetic) and Heider  
16 (phonetic). And usually when we come up from approval, I  
17 talk about our programmers and how hard they've worked, and  
18 they have certainly with the low-rise multifamily work, but  
19 I wanted to introduce some other members of our team that  
20 have been working really hard on this unique carve out for  
21 the 2022 code.

22 So I have Tamara Diaz, who has worked with the  
23 Energy Commission's Tools Team, and with all of the vendors  
24 that you have, Noresco, the Wilcox Group. And she's been  
25 responsible for working with the programmers and doing all



1 the hundreds of hours of testing to make sure that the  
2 tools work.

3           And then I've got Jennifer Brazell, who's our  
4 resource manager, who's worked with Armando and Matt Haro  
5 to make sure all of the application materials were correct  
6 and work with your legal teams and to kind of figure out  
7 how to do this kind of nuanced application that goes for  
8 approval here today.

9           And then probably the hardest job is Cassandra  
10 Dentley, who is our client services director. And she has  
11 been working with the raters, the rating companies, the  
12 building departments, the builders, the HVAC installers,  
13 who have all kind of been in limbo for the past 14 months.  
14 And she's been the one assuring them that we've been  
15 working with the Commission and with our teams to get them  
16 back up and running.

17           And so I wanted to thank them. I wanted to thank  
18 you. And we really appreciate this time for approval. And  
19 if there's any questions, I have a team here to answer  
20 them.

21           CHAIR HOCHSCHILD: Thank you.

22           MS. BADIE: Thank you.

23           We'll now transition to Zoom, and we don't have  
24 any raised hands on Zoom so back to you, Chair.

25           CHAIR HOCHSCHILD: All right, let's go to

1 Commissioner discussion, starting with Commissioner  
2 McAllister.

3 COMMISSIONER MCALLISTER: So I'll just lead off  
4 by saying, you know, wholeheartedly support this, really  
5 important.

6 And I wanted to just thank you, Armando, for the  
7 presentation, you know, well done, and the team that that's  
8 been really working hard with CalCERTS and Noresco and all  
9 the other partners here over the last year-plus, Charlie,  
10 Lorraine, Archie, Maxwell, Judy, Rini (phonetic), Anushka,  
11 Trevor, Kyle, Mikey, Matthew, big team, obviously.

12 And really great to have you here, Shelby, and good to  
13 see you tomorrow.

14 And Jennifer and Cassandra, I really appreciate  
15 your being here as well.

16 This is a result of us parsing out, sort of  
17 pulling out the multifamily piece of the Building Code and  
18 creating new tools to enable, you know, really all the  
19 multifamily developers to know much more clearly and easily  
20 what they have to do to comply with the code. And so it's  
21 been a lift because it's a new thing. It's not just sort  
22 of single family, you know, res and non-res, but it's sort  
23 of res, multifamily and non-res now. Hopefully, all the  
24 developers of the various types of buildings will have the  
25 tools they need at hand readily available and clear and

1 clearly defined. But it was a lot of work to create all  
2 the forms and really the compliance pathway for low-rise  
3 multifamily here, and this is sort of the fruit of the  
4 labors of a lot of folks at the Commission and all the  
5 partners around the state, so strongly in support.

6 Thanks, Armando.

7 CHAIR HOCHSCHILD: All right, unless there are  
8 other Commissioner comments, I would welcome a motion.

9 COMMISSIONER MCALLISTER: I move item nine.

10 CHAIR HOCHSCHILD: From Commissioner McAllister.  
11 Thank you.

12 Is there a second, Commissioner Gallardo?

13 COMMISSIONER GALLARDO: I second.

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

16 COMMISSIONER MCALLISTER: Aye.

17 CHAIR HOCHSCHILD: Commissioner Gallardo?

18 COMMISSIONER GALLARDO: Aye.

19 CHAIR HOCHSCHILD: Vice Chair Gunda?

20 VICE CHAIR GUNDA: Aye.

21 CHAIR HOCHSCHILD: Commissioner Monahan?

22 COMMISSIONER MONAHAN: Aye.

23 CHAIR HOCHSCHILD: And I vote aye as well. Thank  
24 you.

25 We'll turn now to item ten, Convenient, High-

1 Visibility, Low-Cost Level 2 Charging, and welcome Sarah  
2 Sanders.

3 MS. SANDERS: Good afternoon, Chair, Vice Chair,  
4 and Commissioners. My name is Sarah Sanders with the Fuels  
5 and Transportation Division. Today, staff is seeking  
6 approval for two projects that were proposed for funding  
7 under the Convenient, High-Visibility, Low-Cost Level 2  
8 Charging solicitation, otherwise known as Chill-2.

9 Next slide.

10 The proposed projects will benefit Californians  
11 by providing increased access to reliable Level 2 charging.  
12 By installing a large amount of charging ports in a small  
13 area and maintaining at least a 97 percent charger uptime,  
14 projects will improve public awareness of and confidence in  
15 Level 2 charging access. The proposed projects will also  
16 reduce greenhouse gas emissions and criteria air  
17 pollutants, providing air quality benefits to local  
18 communities in the vicinity of the project areas.

19 Next slide, please.

20 Before I present these two projects, I want to  
21 provide a brief overview of the Chill-2 solicitation.  
22 GFO-22-610, otherwise known as Chill-2, was released on  
23 March 23rd, 2023. The focus of this solicitation is to  
24 improve public awareness of and confidence in Level 2  
25 charging access by providing grant funding for high-

1 density, high-visibility Level 2 charger installations.

2           Applicants were asked to identify a one and a  
3 half mile radius of the project area central point in which  
4 all chargers would be installed. Proposed projects must  
5 also install at least 50 percent of the project's chargers  
6 in disadvantaged or low-income communities.

7           Staff has proposed five projects for funding for  
8 a total of around \$25.8 million. The two projects that  
9 I'll be presenting today account for roughly \$10.4 million  
10 out of the total \$25.8 million proposed for awards under  
11 this solicitation. The remaining three projects proposed  
12 for funding under the Chill-2 solicitation will be  
13 presented at subsequent business meetings.

14           Next slide, please.

15           The first proposed agreement is with Eneridge.  
16 Eneridge is requesting slightly more than \$4.5 million and  
17 is contributing roughly \$1.5 million in match funds to  
18 install at least 400 Level 2 charging ports at 13 different  
19 sites in the city of Irvine. Eneridge will be installing  
20 high-speed Level 2 dual-port chargers with power sharing  
21 features and load management capabilities to keep charging  
22 prices low and avoid potential strain on the grid. At  
23 least 50 percent of the chargers will be installed at sites  
24 located in disadvantaged communities, and all chargers will  
25 be publicly available and accessible for at least 18 hours

1 a day.

2           Additionally, the inclusion of multiple property  
3 types within the project area, such as a community park, a  
4 business park, multifamily housing units, and retail  
5 properties allow for a diverse range of users to access the  
6 chargers.

7           Next slide, please.

8           The next proposed agreement is with FlashParking.  
9 FlashParking is requesting around \$5.8 million and  
10 contributing about \$1.9 million in match funding to install  
11 at least 446 Level 2 charging ports across 14 different  
12 sites in the City of Oakland. At least 50 percent of the  
13 chargers will be installed at sites in low-income or  
14 disadvantaged communities and all chargers will be publicly  
15 available and accessible for at least 18 hours a day.

16           The project area is located in a dense urban area  
17 of Oakland that includes multiple property types, such as  
18 multifamily housing units, retail properties, restaurants,  
19 parks, and a conference center. This project area will  
20 allow a diverse range of users to access the chargers.

21           FlashParking will also be installing two battery  
22 energy storage systems at two of the sites. By installing  
23 some Level 2 chargers at sites with a battery energy  
24 storage system and installing some chargers at sites  
25 without, FlashParking will be able to compare business and

1 technology models between the two strategies.

2 Next slide, please.

3 Staff's recommendation is to approve these two  
4 agreements and adopt staff determination that these actions  
5 are exempt from CEQA.

6 On the line, we have Damon Kim from Eneridge and  
7 Matt McCaffree from Flash Parking to answer any questions.

8 Thank you for your consideration. This concludes  
9 my presentation. Also happy to answer any questions.

10 CHAIR HOCHSCHILD: Thank you so much.

11 Let's go to public comment on item ten.

12 MS. BADIE: Thank you.

13 This is Mona Badie, the Energy Commission's  
14 Public Advisor. We're now accepting public comment on item  
15 ten. If you're joining us in the room, we're asking folks  
16 to use the QR code or a show of hands. And then if you're  
17 on Zoom, please use the open-palm symbol on your screen to  
18 notify us. And if joining by phone, press star nine.

19 Just taking a quick scan here, and we're not  
20 seeing any comments on this item, so back to you, Chair.

21 CHAIR HOCHSCHILD: Okay, just real quick, the  
22 uptime requirements, the reliability element of this is  
23 what?

24 MS. SANDERS: 97 percent.

25 CHAIR HOCHSCHILD: 97 percent. Okay. Terrific.

1           Let's go to Commissioner discussion, starting  
2 with Commissioner Monahan.

3           COMMISSIONER MONAHAN: Well, first I want to say,  
4 I think you guys all realize the importance of Level 2  
5 charging, so I'm not going to belabor that point. But I  
6 mean, these are a lot of chargers that are getting  
7 installed from just two grants. And you know, there's more  
8 to come.

9           So just Congratulations to Sarah and the team for  
10 this set of grants and really strongly support it. It's  
11 good for the grid, good for consumers. I love the idea of  
12 having lots of redundancy at sites. And we're learning  
13 like one or two chargers, they break. And so the more  
14 redundancy you have, the better it is for the system.

15           CHAIR HOCHSCHILD: All right, yes, go ahead.

16           COMMISSIONER GALLARDO: Great job, Sarah. Thank  
17 you.

18           I forgot, have the sites already been selected?  
19 Are those final?

20           MS. SANDERS: Yes, the sites have.

21           COMMISSIONER GALLARDO: Okay. Okay. And then I  
22 asked because I've been hearing about churches and  
23 religious centers as also potentially good sites. So I  
24 just wanted to throw that out there as an idea maybe for  
25 future. Thank you.



1 MS. SANDERS: Thank you.

2 CHAIR HOCHSCHILD: Thank you.

3 With that, I'd welcome a motion from Commissioner  
4 Monahan.

5 COMMISSIONER MONAHAN: Move to approve item ten.

6 CHAIR HOCHSCHILD: Is there a second from  
7 Commissioner Gallardo?

8 COMMISSIONER GALLARDO: I second.

9 CHAIR HOCHSCHILD: All in favor, say aye.  
10 Commissioner Monahan?

11 COMMISSIONER MONAHAN: Aye.

12 CHAIR HOCHSCHILD: Commissioner Gallardo?

13 COMMISSIONER GALLARDO: Aye.

14 CHAIR HOCHSCHILD: Vice Chair Gunda?

15 VICE CHAIR GUNDA: Aye.

16 CHAIR HOCHSCHILD: Commissioner McAllister?

17 COMMISSIONER MCALLISTER: Aye.

18 CHAIR HOCHSCHILD: And I vote aye as well. Thank  
19 you, Sara. That motion passes unanimously.

20 And we'll turn now to item 11, which is the  
21 California Pollution Control Financing Authority. Mark  
22 Perry will present.

23 MR. PERRY: Good afternoon, Chair and  
24 Commissioners. My name is Mark Perry and I'm a member of  
25 the Freight and Transit Unit in the Fuels and

1 Transportation Division.

2 Today we're seeking approval for an interagency  
3 agreement with the California Pollution Control Financing  
4 Authority, or the CPCFA, for the Zero-Emission Heavy Duty  
5 Infrastructure Loan Pilot Project. This project will offer  
6 \$5 million in loan loss reserve contributions through the  
7 CPCFA's California Capital Access Program, or CalCAP, as a  
8 credit enhancement to participating financial institutions  
9 that enroll qualified loans for zero emission, medium duty,  
10 and heavy duty charging and fueling infrastructure. Should  
11 a borrower default on a loan, this loan loss reserve  
12 project will cover up to 20 percent of the amount of the  
13 loan.

14 This project will be administered in coordination  
15 with the California Air Resources Board, which will also be  
16 providing funding through CPCFA for zero-emission medium-  
17 duty and heavy-duty vehicles via a separate contract.

18 Next slide, please.

19 This interagency agreement will help expand  
20 California's electric vehicle charging and hydrogen fueling  
21 infrastructure in support of California's climate change  
22 policy goals. As a result of this agreement, the zero-  
23 emission fueling infrastructure that will be deployed is  
24 expected to support the purchase of zero-emission medium-  
25 duty and heavy-duty vehicles which, while making up only a

1 small percentage of total vehicles on the road, have huge  
2 air quality impacts on communities living and working near  
3 heavily trafficked roadways.

4 Project benefits include reduced emissions that  
5 will result in increased public health and safety, as well  
6 as increased economic development outcomes for the larger  
7 community. The benefits of the proposed project will not  
8 only accrue at infrastructure project sites, but will  
9 extend to communities, such as SB 535 disadvantaged  
10 communities and AB 1550 low-income areas.

11 Furthermore, the projects backed by this loan  
12 loss reserve project will show the feasibility of small  
13 scale infrastructure projects to other fleets and will be  
14 able to provide best practices and key lessons learned for  
15 resiliency and future replicability. The proposed projects  
16 might help other freight transportation fleets understand  
17 which technology may work best for their particular duty  
18 cycles and driving environments, which will ultimately  
19 accelerate meeting Governor Newsom's Executive Order  
20 N-79-20 to transition California's entire drayage fleet to  
21 zero emission by 2035.

22 Next slide, please.

23 The goal of this interagency agreement is to  
24 support the Zero-Emission Heavy-Duty Infrastructure Loan  
25 Pilot Project. The CEC will participate in CalCAP as an

1 independent contributor. which allows a government agency  
2 to deposit funds into CalCAP. The CEC will commit up to \$5  
3 million to support the construction and installation of  
4 zero-emission medium- and heavy-duty vehicle fueling  
5 infrastructure for small fleets with a maximum fleet size  
6 of 20 vehicles. CARB will commit an equivalent \$5 million  
7 to support the purchase of fleet vehicles. Assuming it  
8 will cost around \$350,000 to purchase a vehicle, funds from  
9 this agreement could ensure enough fueling infrastructure  
10 for about 65 vehicles.

11 Next slide, please.

12 Staff recommends approval of this interagency  
13 agreement and adoption of staff's determination that this  
14 action is exempt from CEQA.

15 Thank you all for your time and consideration.  
16 And that concludes my presentation. I'm available for any  
17 questions.

18 CHAIR HOCHSCHILD: Thank you so much.

19 Let's go to public comment.

20 MS. BADIE: This is the public comment period for  
21 item 11. If you're joining us in the room, please show  
22 your hand or use the QR code to sign up to make a comment.  
23 If you're joining us by Zoom, please use the raise-hand  
24 feature on your screen, or press star nine if you're  
25 joining us by phone to let us know you'd like to make a

1 comment. And I'm just giving that a moment.

2 Not seeing any hands, Chair. Back to you.

3 CHAIR HOCHSCHILD: Okay, let's go to Commissioner  
4 discussion on I am 11, starting with Commissioner Monahan.

5 COMMISSIONER MONAHAN: Well, first, I want to  
6 emphasize that this is kind of an out-of-the-box strategy  
7 that we're testing. And just want to thank Mark and his  
8 supervisor Michelle, and Samantha Erins (phonetic) from CCO  
9 for embarking on this in collaboration with the California  
10 Air Resources Board.

11 And so, I mean, I think we do need to be  
12 innovative. We do need to figure out new strategies beyond  
13 just giving grants to fund the deployment of  
14 infrastructure. And this is one, you know, it's a risk,  
15 but I think fairly low risk at this point, but we can learn  
16 as we go.

17 Is that a fair characterization, Mark?

18 And that's -- I'm being pithy for you, Chair.

19 CHAIR HOCHSCHILD: Any other? Okay. All right.  
20 Thank you.

21 Let's have a motion from Commissioner Monahan on  
22 Item 11.

23 COMMISSIONER MONAHAN: Move to approve Item 11.

24 CHAIR HOCHSCHILD: Is there a second from the  
25 Vice Chair?

1 VICE CHAIR GUNDA: I second.

2 CHAIR HOCHSCHILD: All in favor, say aye.

3 Commissioner Monahan?

4 COMMISSIONER MONAHAN: Aye.

5 CHAIR HOCHSCHILD: Vice Chair Gunda?

6 VICE CHAIR GUNDA: Aye.

7 CHAIR HOCHSCHILD: Commissioner Gallardo?

8 COMMISSIONER GALLARDO: Aye.

9 CHAIR HOCHSCHILD: Commissioner McAllister?

10 COMMISSIONER MCALLISTER: Aye.

11 CHAIR HOCHSCHILD: And I vote aye as well. Thank  
12 you. And I appreciate your outfit. You're the best-  
13 dressed man here today.

14 MR. PERRY: Oh, thank you.

15 CHAIR HOCHSCHILD: A good Valentine's Day outfit.  
16 Thank you.

17 Let's go to item 12, California Department of  
18 Transportation.

19 Ben De Alba.

20 MR. DE ALBA: Yes. Good afternoon, Chair, Vice  
21 Chair, and Commissioners. My name is Ben De Alba and I  
22 work in the Fuels and Transportation Division. I am joined  
23 by Jimmy O'Dea, who is the Assistant Deputy Director for  
24 Transportation Electrification at Caltrans. And the item  
25 before you pertains to an interagency agreement between

1 Caltrans and the Energy Commission for the implementation  
2 of the National Electric Vehicle Charger Reliability and  
3 Accessibility Accelerator Program, otherwise known as EVC  
4 RAA.

5 I'm pleased to present this item or this  
6 agreement to you today for approval because it officially  
7 makes the Energy Commission the administrator of  
8 California's EVC RAA Program and formalizes yet another  
9 partnership with Caltrans to implement federal funding from  
10 the federal government for zero-emission vehicle  
11 infrastructure.

12 Before I dive into the importance and purpose of  
13 the interagency agreement, I want to first give a brief  
14 overview of the EVC RAA Program.

15 Next slide, please.

16 The EVC RAA is a \$150 million-program that uses  
17 funding from the National Electric Vehicle Infrastructure  
18 Formula Program established under the Infrastructure and  
19 Investment Jobs Act of 2021. The purpose of the program is  
20 to repair and replace existing publicly accessible chargers  
21 that are broken or non-operational across the nation.

22 Caltrans, in partnership with the Commission, applied  
23 for EVC RAA funding in November of 2023 and was  
24 subsequently awarded \$63.7 million in one-time funding on  
25 January 18th, 2024, which is 43 percent of all funds

1 awarded across the nation.

2 Next slide, please.

3 The primary objective of the EVC RAA Program is  
4 to improve reliability of existing electric vehicle  
5 infrastructure by repairing and replacing existing chargers  
6 that are broken or non-operation. California will use the  
7 federal grant from this program to repair or replace 1,302  
8 charging. Moreover, the EVC RAA is a Justice40-covered  
9 program, meaning 40 percent of the chargers must benefit  
10 disadvantaged communities as defined by the federal  
11 government.

12 Next slide.

13 The importance and purpose of this agreement can  
14 be summed up simply: it formalizes the partnership between  
15 Caltrans and the Energy Commission and outlines the roles  
16 of each agency in implementing California's EVC RAA  
17 Program. It formalizes the partnership between -- most  
18 importantly, it assigns the responsibility of administering  
19 this federal award and any future awards for this program  
20 to the Energy Commission.

21 Next slide.

22 The scope of work outlined in the agreement  
23 ensures the efficient management of this new federal  
24 program and leverages the Energy Commission's well-  
25 established grant solicitation process. Specifically, this



1 agreement tasks the Energy Commission with developing and  
2 managing funding opportunities for awarding EVC RAA funds  
3 and developing and managing EVC RAA project agreements.  
4 The estimated costs for the Energy Commission to administer  
5 this program is \$2.4 million. Eighty percent of these  
6 costs are eligible for federal reimbursement, and the  
7 Energy Commission will contribute \$483,532 to fulfill the  
8 20 percent non-federal match requirement.

9           While the Energy Commission takes the lead in  
10 administering the program, the interagency agreement  
11 emphasizes close collaboration between Caltrans and the  
12 Commission to ensure the program's success.

13           Next slide, please.

14           California is poised to enjoy significant  
15 advantages from this new federal program. The EVC RAA  
16 Program aims to improve reliability of the existing  
17 electric vehicle charging network by repairing and  
18 replacing non-operational Level 2 and DC fast chargers.  
19 This will improve the EV drivers' experience and generate  
20 well-paying jobs.

21           Next slide.

22           Staff recommends that the Commission approve the  
23 interagency agreement with Caltrans, approve the \$483,532  
24 in match funding for admin expenses, and adopt staff's  
25 determination that this action is exempt from CEQA.

1           Thank you, and I'll invite Jimmy O'Dea to say a  
2 few words.

3           MR. O'DEA: Good afternoon, Chair, Commissioners.  
4 Jimmy O'Dea, Caltrans. Really great to be here  
5 representing the State DOT and with this exciting  
6 opportunity to work with Energy Commission again on another  
7 federal program.

8           Kudos to Ben and the CEC team for helping put  
9 together our application. We brought home \$64 million,  
10 like Ben said, 43 percent of federal funds, so we punched  
11 way above our weight in bringing federal funds to  
12 California. A first-of-its-kind program, you know,  
13 addresses a key need for reliability of broken chargers  
14 across the state for EV drivers, the industry, and our  
15 state EV goals.

16           Kudos to my colleagues at Caltrans, Emily Belding  
17 that led our application, and Amid Vizari (phonetic) that  
18 is going to lead the oversight role for us.

19           And really just to say how easy this  
20 collaboration has been building off of our NEVI  
21 collaboration, another big federal program. And I think  
22 the next ones will just get easier and easier. So really,  
23 just cheers to interagency collaboration, and thanks for  
24 having me here.

25           CHAIR HOCHSCHILD: Thank you. Wonderful to have

1 you here.

2           And with that, let's go to public comment, if we  
3 could?

4           MS. BADIE: Thank you, Chair.

5           The Commission now welcomes public comment on  
6 item 12 of the agenda. And if you're in the room with us,  
7 we're asking you to use the QR code or just wave your hand.  
8 And if you're joining us on Zoom, please use the open-palm  
9 icon on the screen to notify us. And if calling by phone,  
10 press star nine. And I'm just giving that a moment.

11           Not seeing any raised hands. Back to you, Chair.

12           CHAIR HOCHSCHILD: Thank you.

13           Let's go to Commissioner discussion, starting  
14 with Commissioner Monahan.

15           COMMISSIONER MONAHAN: Well, first I want to  
16 acknowledge Caltrans and their leadership with Jimmy at the  
17 helm, Jimmy at point, maybe Tony Tavares is at the helm,  
18 but -- and Jimmy sort of discounted, I think, some of the  
19 challenges, not because of Caltrans, but just because of  
20 federal requirements.

21           And there's been a lot of work that both agencies  
22 had to do to make this happen. And Jimmy, you were  
23 instrumental, as was Ben, as was our Chief Counsel's  
24 Office, so I just want to give a shout out to the folks in  
25 our Chief Counsel's Office who were involved in this. It's

1 hard and you guys have made it sound very easy, but it  
2 wasn't that easy.

3           And I would also say, you know, this fits in the  
4 basket of activities we're doing on charger reliability.  
5 So we have this program, EVC RAA, which what a great name,  
6 RAA, to repair chargers. And we also have -- you know,  
7 we're in the process of developing reliability standards  
8 we'll be issuing. We've already issued one draft. We'll  
9 be issuing a new draft very soon. We have a study to UC  
10 Davis to evaluate this, challenge of chargers broken across  
11 the state. And, you know, we're doing a suite of  
12 activities, but this fits in that whole basket.

13           I'm wondering, Ben, if you could speak briefly to  
14 the -- I mean, it's kind of expensive per charger, the  
15 number of chargers you laid out versus the amount, so can  
16 you talk about some of the upgrades that will happen as a  
17 result of this?

18           MR. DE ALBA: Yeah, absolutely. So we're  
19 expecting to either repair or replace 900 -- about 980  
20 Level 2 ports and approximately 323 DC fast charging ports  
21 with this funding. The federal government requires a 20  
22 percent, a minimum 20 percent of non-federal match, so we  
23 expect that the money will go a little further once the  
24 private sector is contributing a portion to the projects.

25           The catch is these replacements need to be on the

1 U.S. DOE's NREL eligibility lists, and so there's a  
2 predetermined set of sites that are eligible for this  
3 funding, and those are spread across the state. But we've  
4 got the award from the feds to do at least 1,302 ports, and  
5 we're investigating that a little further with the Federal  
6 Highway Administration right now.

7 COMMISSIONER MONAHAN: Great, thank you.

8 CHAIR HOCHSCHILD: Unless there's other comments  
9 from the dais, I'd welcome a motion I item 12 from  
10 Commissioner Monahan.

11 COMMISSIONER MONAHAN: I move to approve this  
12 item.

13 CHAIR HOCHSCHILD: IS there a second from Vice  
14 Chair?

15 VICE CHAIR GUNDA: Second the item.

16 CHAIR HOCHSCHILD: All in favor, say aye.  
17 Commissioner Monahan?

18 COMMISSIONER MONAHAN: Aye.

19 CHAIR HOCHSCHILD: Vice Chair Gunda?

20 VICE CHAIR GUNDA: Aye.

21 CHAIR HOCHSCHILD: Commissioner Gallardo?

22 COMMISSIONER GALLARDO: Aye.

23 CHAIR HOCHSCHILD: Commissioner McAllister?

24 COMMISSIONER MCALLISTER: Aye.

25 CHAIR HOCHSCHILD: And I vote aye as well. That

1 item passed unanimously.

2 Thank you both for being here. Congratulations.

3 We'll turn now to item 13, BYD Coach & Bus LLC,  
4 RIDE Coach & Bus, which was formerly BYD; correct? Yes.

5 MS. MAGANA: Good afternoon, Chair, Vice Chair,  
6 and Commissioners. I'm Pilar Magana with the Fuels and  
7 Transportation Division.

8 Staff is seeking approval for a project with BYD  
9 Coach & Bus dba RIDE Coach & Bus, who we will be referring  
10 to as RIDE, in Lancaster, California, which is being  
11 proposed for funding under the zero-emission transportation  
12 manufacturing solicitation.

13 Next slide, please.

14 As of January 2023 notice of proposed awards, 13  
15 projects are recommended for funding under the solicitation  
16 for a total of \$197.9 million. This is the 12th project  
17 being proposed for funding under this solicitation with 11  
18 projects already approved at previous business meetings.

19 Next slide, please.

20 RIDE, which stands for Real Innovation Delivered  
21 with Excellence, will construct a manufacturing facility in  
22 Lancaster to produce a family of battery electric school  
23 buses that will accelerate California's ability to meet  
24 emission reduction goals. This project supports efforts to  
25 electrify school bus fleets throughout the state via

1 Assembly Bill 579, which mandates all new school buses be  
2 zero emissions starting 2035. While this mandate is also  
3 being supported through programs such as the CEC School Bus  
4 Replacement Program, the availability of electric school  
5 buses must also be addressed. This project will serve as a  
6 key component for increasing access to a number of battery  
7 electric school bus classifications.

8 At full production capacity, this facility will  
9 be capable of manufacturing up to 4,000 battery electric  
10 school buses per year while increasing green energy jobs in  
11 California, boosting California's economy by bolstering its  
12 clean energy commerce, and strengthening California's  
13 presence and leadership in the electric vehicle  
14 manufacturing market.

15 Through the establishment of this facility, RIDE  
16 will also provide training resources to support the  
17 creation of up to 448 indirect and three 33 direct local  
18 jobs for the manufacturing facility.

19 Furthermore, production and distribution of these  
20 school buses will reduce bus operating costs by up to 30  
21 percent and more importantly reduce emission exposure for  
22 children that ride these buses.

23 Next slide, please.

24 Under this agreement, RIDE will not only build a  
25 battery electric school bus manufacturing facility, they

1 will also produce up to 400 battery electric vehicles  
2 during this agreement term. As Ride zero-emission school  
3 bus begins to replace fossil fuel school buses in school  
4 bus fleets in California, this manufacturing project will  
5 enable California to achieve its environmental pollution  
6 reduction and greenhouse gas reduction goals more quickly.  
7 BYD estimates that each -- or RIDE estimates that each bus  
8 replacement will decrease CO2 emissions by over 80 percent.  
9 This agreement is for \$30 million with over \$39 million  
10 provided in match funding.

11 Next slide, please.

12 Staff is seeking your approval of this agreement  
13 and adoption of its findings that the City of Lancaster's  
14 initial study, mitigated negative declaration, and other  
15 approved CEQA documents on file show that the project will  
16 not have a significant impact on the environment.

17 We have Junie Chen (phonetic) and John Zhuang  
18 from RIDE attending in person who will be happy to answer  
19 any questions. And as mentioned earlier, we also have a  
20 representative from Jobs to Move America who would like to  
21 speak on behalf of BYD via Zoom.

22 This is the conclusion of my presentation and I'm  
23 happy to answer any questions.

24 CHAIR HOCHSCHILD: Great. Thank you.

25 Let's go to public comment.



1 MS. BADIE: Good afternoon. The Commission now  
2 welcomes public comment on item 13. If you're in the room  
3 with us, we're asking folks to use the QR code to let us  
4 know or raise your hand. And if you're joining by Zoom,  
5 the raise-hand feature on your screen, it looks like an  
6 open palm, or press star nine if you're joining by phone.

7 So in the room with us, we have John Zhuang, if  
8 you want to approach the podium and please spell your name  
9 for the record? We're asking for comments to be two  
10 minutes or less. There will be a timer on your screen,  
11 John. Thank you.

12 MR. ZHUANG: Thank you, Chair, Commissioners, and  
13 staff for the opportunity to speak. My name is John  
14 Zhuang, spelled Z-H-U-A-N-G, and I head up Legal and  
15 Regulatory Affairs at RIDE. RIDE is honored and excited  
16 for this opportunity to further cement our great state's  
17 position as the world leader in climate-saving clean  
18 technologies.

19 In 2013, our company built a manufacturing  
20 facility in Lancaster, California to make some of our  
21 nation's first commercial electric vehicles. Today, we are  
22 incredibly proud to have the opportunity to continue our  
23 efforts through this California electric school bus  
24 manufacturing facility. These school buses will be powered  
25 by our clean, safe, and durable iron phosphate batteries.

1 They will also be available to carry next-generation  
2 technologies like grid-aiding vehicle-to-grid technology.  
3 Operating at full speed, we anticipate this facility will  
4 create nearly 500 direct jobs and make as much as 4,000  
5 climate-saving electric school buses a year.

6 This project would not have been possible without  
7 the support and trust of this Commission in our great  
8 state. So, on behalf of the entire RIDE team, we want to  
9 sincerely thank you for providing these incredible  
10 platforms to enhance the growth of renewable technologies.  
11 We're incredibly grateful for your support, and we look  
12 forward to next steps.

13 CHAIR HOCHSCHILD: Thank you so much.

14 MS. BADIE: Thank you.

15 CHAIR HOCHSCHILD: Any other?

16 MS. BADIE: Yes, we have some folks on Zoom.

17 CHAIR HOCHSCHILD: Okay.

18 MS. BADIE: Next, we'll hear from Martin Barrera.

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

23 MR. BARRERA: All right. Thank you. Hello. I  
24 am Martin Barrera, M-A-R-T-I-N B-A-R-R-E-R-A. I am the  
25 Workforce Equity Coordinator at Jobs to Move America.

1           And I want to first congratulate RIDE on  
2 receiving the maximum allocation for this grant. I also  
3 want to use this public comment to uplift them as a leader  
4 in this industry, showcasing the possibility of an  
5 effective relationship between manufacturers, laborers, and  
6 the community.

7           RIDE sat down with Jobs to Move America and our  
8 coalition of community partners, as well as our labor  
9 partner, Smart Local 105, and chose to sign a community  
10 benefits agreement way back in 2017. Since then, they have  
11 continually renewed the agreement and delivered on their  
12 promises to the Antelope Valley community, where they now  
13 employ 70 percent of the workers from disadvantaged  
14 communities, such as people of color, women, returning  
15 citizens, veterans, and aged-out foster youth.

16           Through their collaboration with the Union  
17 Apprenticeship and Pre-Apprenticeship Program, they  
18 continually invest in training the community, providing  
19 opportunities for workers to improve the workplace, and  
20 grow in their career.

21           As RIDE looks to construct a new facility  
22 specifically for electric school buses, I commend them for  
23 continuing to set the example by having a project labor  
24 agreement in place for the construction of this project.  
25 Overall, RIDE should be seen as a template for how to lead

1 our transition to a just green economy by working alongside  
2 community and labor to ensure good quality jobs and  
3 opportunities for workers and community members. I'm  
4 excited for RIDE to continue their great work and urge  
5 others to see them as the North Star as we continue to  
6 march to electrify our vehicles and away from fossil fuels.

7 Thank you.

8 MS. BADIE: Thank you, Martin.

9 Next, we'll hear from Sarah Arveson.

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

13 MS. ARVESON: Hi. My name is Sarah Arveson,  
14 again, that's S-A-R-A-H A-R-V-E-S-O-N, again, from United  
15 Auto Workers, Region 6, representing over 100,000 UAW  
16 members in the Western states.

17 UAW just wants to express how pleased we are with  
18 this grant approval recommendation for BYD/RIDE, which will  
19 help accelerate the state's transition to a green economy.  
20 It's key that the electrification of our transportation  
21 sector also benefits workers and communities. BYD/RIDE has  
22 been an exemplary company in this way by working with Smart  
23 Local 105, Jobs to Move America, and community partners to  
24 make sure construction jobs and manufacturing jobs related  
25 to projects are good union jobs that benefit the most

1 disadvantaged residents. And they did this through  
2 negotiating a community benefits agreement.

3           So we look forward to CEC continuing to support  
4 these high road employers who demonstrate meaningful  
5 accountability to our communities.

6           MS. BADIE: Thank you.

7           And that concludes public comment. Back to you,  
8 Chair.

9           CHAIR HOCHSCHILD: All right. I'll just say, I  
10 have visited your facility multiple times. Really want to  
11 congratulate you on the progress. And people need to  
12 understand, conventional buses, you know, fumes get in the  
13 cab and affect kids lungs. So this is really not just a  
14 climate issue, it's a health issue for kids. And so, for  
15 me, this is just a really sweet spot for us to be as a  
16 Commission.

17           I really want to thank Commissioner Monahan and  
18 the whole team for all the work on this and to be able to  
19 manufacture and deploy these buses here. You know, we've  
20 done more of that than any other state in the country. The  
21 governor has been terrific on this. So I just really want  
22 to lift up the value and the need for this transition.

23           And with that, I would ask we go to Commissioner  
24 discussion, starting with Commissioner Monahan.

25           COMMISSIONER MONAHAN: Well, I just, I also want

1 to commend BYD/RIDE. And I just find it very inspirational  
2 that you have a company who came from China to locate in  
3 California to manufacture in California electric buses.  
4 And you came to California and then you like worked with  
5 labor to make sure that you were doing all you could to  
6 provide good paying jobs for your workers. And it's  
7 really, as one of the commenters said, exemplary.

8 And I just want to say, you know, BYD is now  
9 the -- sells more electric vehicles than any manufacturer  
10 in the world. And having a company come to California and  
11 really adopt, I would say, the California ethos and just  
12 really thrive, we want you to thrive here in California,  
13 it's heartening.

14 So, Pilar, thanks to you and Jonathan and Joji  
15 (phonetic) and the team on this, and really excited to  
16 support you in the expansion to electric school buses, also  
17 an issue near and dear to my heart.

18 CHAIR HOCHSCHILD: Okay, with that, I welcome a  
19 motion from Commissioner Monahan on item 13.

20 COMMISSIONER MONAHAN: I move to approve item 13.

21 CHAIR HOCHSCHILD: Is there a second from the  
22 Vice Chair?

23 VICE CHAIR GUNDA: Yes, I can.

24 CHAIR HOCHSCHILD: All in favor, say aye.

25 Commissioner Monahan?

1 COMMISSIONER MONAHAN: Aye.

2 CHAIR HOCHSCHILD: Vice Chair Gunda?

3 VICE CHAIR GUNDA: Aye.

4 CHAIR HOCHSCHILD: Commissioner Gallardo?

5 COMMISSIONER GALLARDO: Aye.

6 CHAIR HOCHSCHILD: Commissioner McAllister?

7 COMMISSIONER MCALLISTER: Aye.

8 CHAIR HOCHSCHILD: And I vote aye as well. That  
9 item passes unanimously.

10 Congratulations.

11 We'll turn now to item 14, Investment Plan Update  
12 for the Clean Transportation Program.

13 MR. TUGGY: Good afternoon, Chair, Vice Chair,  
14 Commissioner. I'm Benjamin Tuggy, the Project Manager for  
15 the 2023-2024 Investment Plan Update for the Clean  
16 Transportation Program.

17 Today we're seeking your approval of this  
18 Investment Plan Update which includes proposed funding  
19 allocations for fiscal year 2023-2024 and planned funding  
20 allocations for subsequent fiscal year. If approved the  
21 current Lead Commissioner Report version originally  
22 published on January 30th, will be reissued as a final  
23 commission report.

24 Next slide, please.

25 I'll just give a quick background.

1           So the transportation sector creates about 50  
2 percent of statewide greenhouse gas emissions when  
3 including fuel production, and it causes significant harms  
4 to public health and environmental quality due to air and  
5 water pollution. Reducing air pollution from  
6 transportation is critical to achieving a more  
7 environmentally-just society, given that air quality  
8 burdens fall disproportionately on vulnerable and  
9 disadvantaged communities.

10           So in order to reduce negative impacts to public  
11 health and the environment to meet emission reduction  
12 goals, the Clean Transportation Program was established by  
13 California Assembly Bill 118 in 2007 and reauthorized by  
14 Assembly Bill 8 in 2013. The program is funded through a  
15 small surcharge on California vehicle registrations and  
16 provides up to \$100 million per year.

17           Next slide. Next slide, please. Perfect.

18           Last September, the legislature reauthorized the  
19 Clean Transportation Program again, through July 1, 2035,  
20 by Assembly Bill 126.

21           The law also made some changes to the program.  
22 For instance, the focus is now on zero-emission  
23 technologies where feasible, and near-zero-emission  
24 technologies elsewhere. There are new equity requirements,  
25 one of which I'll mention in a minute.



1           And there was previously a requirement to spend  
2 20 percent of funds on hydrogen projects. AB 126 changed  
3 that to at least 15 percent of Clean Transportation  
4 Program-based funds going to hydrogen.

5           There is also now more clarity that light-duty  
6 and medium- and heavy-duty projects are eligible, and there  
7 are a few other caveats. For instance, the hydrogen  
8 funding carve-out ends in 2030.

9           Next slide.

10           So I'd like to give a few highlights of the  
11 program as of July 2023.

12           Now in its 15th year, the Clean Transportation  
13 Program has provided over \$1.8 billion in funding for a  
14 broad spectrum of zero-emission vehicles and  
15 infrastructure, alternative fuels and technologies, and  
16 workforce development projects. The Investment Plan itself  
17 has some more detail, so I'll just go over key highlights.

18           The program has funded over 24,000 installed or  
19 planned chargers for light-duty plug-in electric vehicles.  
20 This helped the state reach the goal of 10,000 DC fast  
21 chargers by 2025 last September, so about two years ahead  
22 of schedule.

23           The program has created innovative and efficient  
24 block grants for both light-duty and medium- and heavy-duty  
25 ZEV infrastructure.

1           It has also supported the largest network of  
2 hydrogen fueling stations in the nation. The hydrogen  
3 numbers are a bit more recent as of the Assembly Bill 8  
4 report. So despite some recent setbacks, there are still  
5 107 publicly-available hydrogen fueling stations funded and  
6 planned for funding. Of these, 15 will be multipurpose,  
7 accommodating medium- and heavy-duty vehicles, as well as  
8 passenger vehicles. There are also 23 privately funded  
9 stations under development. And when including these, the  
10 total is 130 stations.

11           The program has funded 40 manufacturing projects,  
12 supporting in-state economic growth, while reducing the  
13 supply-side barriers for ZEVs, ZEV components, including  
14 batteries, and ZEV infrastructure.

15           It has created workforce training for more than  
16 32,000 trainees and 277 businesses.

17           And finally, the program has leveraged more than  
18 a billion dollars in private and other public matching  
19 funds.

20           Overall, investments made through the Clean  
21 Transportation Program and related general funds and  
22 greenhouse gas reduction funds provided through recent  
23 budget acts are essential to meeting the state's ambitious  
24 climate goal.

25           Next slide.

1           Now I'd like to discuss what the Clean  
2 Transportation Program Investment Plan Update is and how it  
3 was developed.

4           So the Investment Plan is a high-level view. It  
5 identifies general categories rather than specific  
6 projects, but projects funded by the program must be  
7 consistent with the priorities identified in the Investment  
8 Plan. Specifically, the Investment Plan identifies how  
9 each fiscal year's funds will be allocated across different  
10 fuels, vehicle sectors, and supporting activities such as  
11 workforce development.

12           The Investment Plan also describes potential  
13 allocations for future fiscal years to provide greater  
14 visibility and improve planning. I will note that this  
15 2023-2024 Investment Plan includes those future fiscal  
16 years only for the projected greenhouse gas reduction funds  
17 and general funds. For the Clean Transportation Program-  
18 based funds, this Investment Plan only includes allocations  
19 for fiscal year 2023-2024, so there's two different  
20 timelines there.

21           The allocations reflect consideration of state  
22 and federal policies and regulations, as well as  
23 coordination with state agencies such as the California Air  
24 Resources Board, the Public Utilities Commission, the State  
25 Transportation Agency, and the Governor's Office of

1 Business and Economic Development.

2 Next slide.

3 This Investment Plan was developed through a  
4 rigorous public process that included workshops and review  
5 of formal comments. The plan also benefited hugely from  
6 guidance from the Clean Transportation Program Advisory  
7 Committee, which was expanded in 2020 to better reflect  
8 California communities, including environmental justice  
9 communities, public health organizations, rural and tribal  
10 communities, and labor and workforce training groups.

11 And by the way, applications are now open to  
12 serve on the 2024 to 2027 term of the Advisory Committee.  
13 So folks who are interested can see Docket Number 23-ALT-01  
14 for info on that.

15 Additionally, CEC staff consulted with the  
16 Disadvantaged Communities Advisory Group for guidance and  
17 recommendations on how to improve program effectiveness as  
18 it relates to disadvantaged communities and other  
19 vulnerable and underrepresented groups. The CEC revised  
20 the Investment Plan Update based on the feedback received  
21 and will also use this input to inform future  
22 solicitations.

23 Next slide.

24 The Clean Transportation Program continually  
25 works to increase the participation of and bring benefits

1 to disadvantaged and underrepresented communities from  
2 diverse geographic regions. The CEC also seeks to  
3 effectively engage communities that are disproportionately  
4 burdened by pollution and improve economic resiliency,  
5 including in rural and tribal communities. This Investment  
6 Plan seeks to provide more than 50 percent of funds to  
7 projects that benefit low-income and disadvantaged  
8 communities, which will soon be required under Assembly  
9 Bill 126.

10           Staff is working to better define and measure  
11 those community benefits, going beyond just project  
12 location and greenhouse gas reductions, looking at things  
13 like health, mobility options, economic benefits, and more.  
14 And we've held two workshops on this topic so far.

15           We are also consulting with the CEC's Public  
16 Advisor's office, the Tribal Program, and the Tribal Lead  
17 Commissioner for assistance with outreach and promotion of  
18 transportation-related funding opportunities to tribes.  
19 And we released our first solicitation for tribal EV  
20 charging, planning, and workforce development, GFO-23-607,  
21 on January 18th of this year.

22           Next slide.

23           The CEC is also working to expand outreach and  
24 inclusion of nonprofit and community-based organizations.  
25 Many solicitations include incentives or even requirement

1 for community-based organizations to be involved. And we  
2 are looking at other ways to support nonprofit  
3 organizations in ZEV infrastructure deployment.

4 Next slide.

5 So far, 58.6 percent of Clean Transportation  
6 Program funds have gone to projects located in low-income  
7 and disadvantaged communities. That figure excludes  
8 certain projects such as for some recent block grants for  
9 which we do not know the specific site addresses yet. Only  
10 after funding is assigned to specific sites can staff  
11 determine if those sites are in a low-income or  
12 disadvantaged community. When also excluding projects that  
13 are known to be statewide, more than 68 percent of funds  
14 have gone to projects in low-income, disadvantaged, or  
15 both.

16 Next slide.

17 Now I'll go over the proposed allocations for the  
18 plan.

19 So this Investment Plan Update proposes  
20 investments across a range of zero-emission vehicle fuels,  
21 technologies, and supporting activities such as workforce  
22 development. This graphic provides a visual of the total  
23 funding, which is about \$1.85 billion for fiscal years  
24 2023-2024 through 2026-2027. These investments reflect  
25 both one-time greenhouse gas reduction funds and general

1 funds from recent state budget acts, as well as the  
2 Assembly Bill 126 Clean Transportation Program funds, which  
3 we call the base funding. Once again, we have not yet  
4 proposed allocations for those base funds after this fiscal  
5 year.

6 As for the State Budget Act allocations, they are  
7 set in law. The CEC cannot change those. And those State  
8 Budget Act allocations are subject to change as the 2024-  
9 2025 state budget is developed. These investments  
10 complement federal investments through the National  
11 Electric Vehicle Infrastructure, or NEVI, Formula Program,  
12 of which California's allocation is expected to be \$384  
13 million. And next I'll describe some of the proposed  
14 investments in each of these categories.

15 Next slide.

16 So starting with light-duty EV charging, the  
17 Investment Plan Update allocates \$658 million, not counting  
18 those federal NEVI Formula funds. Part of that total is  
19 \$275 million in greenhouse gas reduction funds for  
20 equitable at-home charging for multifamily residents and  
21 priority communities, including rural areas that have  
22 limited access to charging infrastructure.

23 CHAIR HOCHSCHILD: Ben, so I think the Vice Chair  
24 had a question.

25 VICE CHAIR GUNDA: Just on this one, when we are

1 thinking about the high-power chargers for rural  
2 communities, how are we -- is the thought with the context  
3 of the grid readiness or how -- is that part of the  
4 Investment Plan?

5 MR. TUGGY: Yeah, that's a great question. The  
6 Investment Plan, because the scope is more high level, it  
7 doesn't necessarily talk about some of the solicitation  
8 details like that. I know we have discussed issues of grid  
9 readiness, including in rural communities. I'd be happy to  
10 see if any folks on this, any of the solicitation managers,  
11 for instance, can speak more on that, or I could follow up  
12 with you later. But, yeah, a little bit out of the scope  
13 of the Investment Plan itself.

14 VICE CHAIR GUNDA: Yeah. I just want to say this  
15 for I think part of kind of thinking about the Investment  
16 Plan, first of all, it's great that we're thinking about  
17 it, just in terms of grid readiness, potential deferral of  
18 distribution upgrades, and the potential of local resource,  
19 I think would be a great thing. I'm sure we're thinking  
20 about it, but just wanted to put it out there as one of the  
21 critical needs.

22 MR. TUGGY: Yeah, absolutely. And well,  
23 actually, my next point here was that we are looking at  
24 also building out a broad network of grid-integrated high-  
25 powered fast chargers. So that's a little bit of a broader



1 term, but definitely looking at the grid impacts. So that  
2 network of fast chargers will support travel across the  
3 state and supplement federal NEVI funding for corridor fast  
4 charging.

5 In the current fiscal year, this Investment Plan  
6 identifies \$42.6 million from base program funds and \$95  
7 million of greenhouse gas reduction funds for light-duty EV  
8 charging infrastructure.

9 Next slide.

10 The Investment Plan also allocates \$1.15 billion  
11 for medium- and heavy-duty ZEV infrastructure, which  
12 includes both hydrogen refueling and EV charging over the  
13 next four years. The Budget Act of 2023 requires the CEC  
14 to fund ZEV infrastructure for specific categories, so that  
15 includes \$230 million for drayage trucks, \$375 million for  
16 school bus ZEV infrastructure, \$364 million for truck, bus,  
17 and off-road equipment, and \$130 million for ports.

18 The CEC is allocating an additional \$47.6 million  
19 in Clean Transportation Program-based funds for medium- and  
20 heavy-duty ZEV infrastructure. At least \$15 million of  
21 that is reserved for hydrogen infrastructure, but again,  
22 hydrogen projects are eligible in the other categories I  
23 mentioned, so that \$15 million is just the minimum.

24 These funds will support deploying thousands of  
25 zero-emission medium- and heavy-duty vehicles around the

1 state. And for this fiscal year, the plan proposes  
2 investing that \$47.6 million of base funds, as well as \$344  
3 million in greenhouse gas reduction funds and general funds  
4 in medium- and heavy-duty ZEV infrastructure. This  
5 reflects the need to swiftly transition the most polluting  
6 vehicles towards zero-emission technologies in the most  
7 sensitive regions of the state.

8 Next slide.

9 The \$46 million emerging opportunities allocation  
10 highlighted here includes funding from the Greenhouse Gas  
11 Reduction Fund for sectors that are only beginning to  
12 transition to zero emission, so that includes aviation,  
13 locomotives, and marine vehicles.

14 The allocation will also support vehicle grid  
15 integration efforts, such as mitigating electric vehicles  
16 charging during times of peak demand or high carbon  
17 intensity on the grid, as well as bidirectional charging,  
18 which actively supports the grid.

19 Currently, this category is projected to receive  
20 State Budget Act funds only in fiscal year 2025-2026.

21 Next slide.

22 And finally, for fiscal year 2023-2024, \$5  
23 million in base Clean Transportation Program funding will  
24 support ZEV workforce development. These investments will  
25 prioritize disadvantaged and low-income communities to

1 support more equitable achievement of the state's zero-  
2 emission transportation goals.

3 Next slide.

4 And I would like to take a moment to thank the  
5 Clean Transportation Program Advisory Committee for their  
6 guidance in developing this Investment Plan. So the  
7 members as of December 31st of last year, which was the end  
8 of the most recent term of the committee, are all listed up  
9 here.

10 With that, I'll transition to the staff  
11 recommendation.

12 Next slide.

13 So staff recommends approving the 2023-2024  
14 Investment Plan Update, which will approve the plan's  
15 proposed funding allocations for fiscal year 2023-2024.  
16 and signal the projected funding allocations for future  
17 fiscal years. Staff also recommends a determination that  
18 this plan is not a project under CEQA or in the  
19 alternative, if deemed to be a project, that it is exempt.

20 Thank you. I'm happy to answer any questions.  
21 And we may have members of the Disadvantaged Communities  
22 Advisory Group and the 2020 to 2023 term of the Clean  
23 Transportation Program Advisory Committee who will speak  
24 during public comment, so the Public Advisor will handle  
25 that.

1 CHAIR HOCHSCHILD: Thank you so much, Ben.

2 We'll go to public comment on item 14.

3 MS. BADIE: Thank you, Chair.

4 So first, I'd like to ask if there's any Clean  
5 Transportation Program Investment Plan Advisory Committee  
6 members online to raise your hand, and if you're joining by  
7 phone, to please press star nine.

8 We are joined by Bill Magavern on the advisory  
9 committee in the room with us.

10 Bill, if you want to approach the podium, please  
11 spell your name for the record before making your remarks.

12 MR. MAGAVERN: Thanks very much. Good afternoon,  
13 Bill McGovern, B-I-L-L M-A-G-A-V-E-R-N, with the Coalition  
14 for Clean Air. And I've been involved in actually helping  
15 to pass the initial legislation that established the Clean  
16 Transportation Program, as well as all three  
17 authorizations, most recently, last year. And as was  
18 mentioned, I did serve on the advisory committee that  
19 advised on this plan and I'm here to support your adoption  
20 of the plan and to thank, especially Commissioner Monahan  
21 and the staff, for all your hard work on it.

22 And one of the main elements that we have  
23 consistently sought, both in the CEC's plans and now in AB  
24 126 as law, is to have at least a majority of the funding  
25 go to disadvantaged and low-income communities. So it's

1 great to know that you appear to be already exceeding that  
2 and you're working on refining the metrics going forward.

3           Looking to the future, there are a couple areas I  
4 wanted to highlight. One is we really urge you to  
5 emphasize the infrastructure for zero-emission medium- and  
6 heavy-duty vehicles because, as Chair Hochschild mentioned  
7 earlier in talking about buses, diesel exhaust really is a  
8 great concern and it disproportionately affects low-income  
9 communities of color, and it really is the greatest human  
10 health risk that is posed by air pollution. And that, of  
11 course, comes predominantly from medium- and heavy-duty  
12 transportation.

13           So we want to put a priority on making that  
14 transition to completely clean medium- and heavy-duty  
15 transportation. And we think that when you fund, in the  
16 future, hydrogen stations, they should always be able to  
17 serve those trucks and buses that are zero-emission fuel  
18 cell electric vehicles. And that also when it comes to  
19 grid charging, that we focus on the medium- and heavy-duty  
20 sector.

21           And secondly, reliability. I know you're working  
22 on it, but I just want to highlight that it's absolutely  
23 vital when it comes to hydrogen fueling or grid charging  
24 light-duty or heavy-duty. We absolutely need for those  
25 networks to be reliable so that individuals and businesses

1 can count on it being there when we when we need it.

2 Thank you very much.

3 MS. BADIE: Thank you. And we're also joined by  
4 Disadvantaged Communities Advisory Group member Adrian  
5 Martinez on the line.

6 Adrian, I'm going to open your line. You'll just  
7 unmute on your end. Thanks for joining us.

8 MR. MARTINEZ: Hi. Good afternoon, Chair  
9 Hochschild and members of the Commission. My name is  
10 Adrian Martinez and I'm a member of the Disadvantage  
11 Communities Advisory Group.

12 First off, I want to really thank the staff of  
13 CEC, both the staff that help our Disadvantage Communities  
14 Advisor Group, Dorothy and Mona, amongst many others, and  
15 then also the Clean Transportation staff. I think this is  
16 a real great example of how Commission staff have utilized  
17 the Disadvantaged Communities Advisory Group to provide  
18 feedback. We provided feedback on several rounds of  
19 planning for the Clean Transportation Investment Program.  
20 I really thank Commissioner Monahan for engaging our group.  
21 And I think the plan reflects a lot of the feedback we've  
22 made. Obviously, it's a continual effort to make sure that  
23 disadvantaged communities are benefited by the Commission  
24 programs, but we think this proposal provides a good  
25 balance on that.

1           I do want to flag one recommendation we've made,  
2 and it's not necessarily part of this plan, although it was  
3 on one of the slides, is one of the recommendations that  
4 DACAG has made is that for the NEVI funds, there's a lot of  
5 funds that are going to light duty charging infrastructure.  
6 But we think, given that that will not use up all the NEVI  
7 funds, there will be significant amounts of funding left  
8 over for medium- and heavy-duty charging.

9           We think it's important for the Commission to  
10 work with Caltrans to start investing those dollars in  
11 medium- and heavy-duty charging as soon as possible. We  
12 know we have some time before that plan is revised in  
13 August, but I think getting leadership of the Commission to  
14 work with Caltrans to start thinking about how do we use  
15 those important and vital federal dollars to get publicly  
16 available charging for large trucks will go a long way in  
17 addressing a lot of the harms that Bill McGovern just  
18 referenced related to air pollution.

19           But we really appreciate this effort. We're  
20 excited to see these dollars hit the streets. I even saw  
21 today a couple electric vehicles that have benefited from  
22 this program and are there because of this effort. And we  
23 thank the Commission for all the work they're doing on this  
24 important issue.

25           MS. BADIE: Thank you.

1           And with that, we'll transition to the public  
2 comment period. If you're joining us in the room, we're  
3 asking folks to use the QR code or a show of hands. And if  
4 you're joining by Zoom, please use the raise-hand feature  
5 on your screen or star nine if you're joining by phone.  
6 That will let us know that you'd like to make a comment.

7           And I'm not seeing anyone in the room or on Zoom  
8 for public comment, so back to you chair.

9           CHAIR HOCHSCHILD: Thank you so much.

10          Let's go to Commissioner discussion, starting  
11 with Commissioner Monahan.

12          COMMISSIONER MONAHAN: Well, I first want to  
13 address the question that Vice Chair Gunda raised about the  
14 grid friendliness of DC fast charging. And I will say that  
15 there is a tension between rapidly deploying infrastructure  
16 and making it grid friendly. It costs more to make it grid  
17 friendly. Pairing it with solar plus storage means you  
18 build less chargers.

19          And in general, we think of the block grants that  
20 we have as sort of the rapid deployment. They already have  
21 to have utility plans in place. So they're already kind of  
22 meaning that the grid is ready for it, the grid should be  
23 ready for it. And we've used our solicitations to do more  
24 of the pairing with solar plus storage. And I will say  
25 this is a tension that we face because we need to build as



1 many chargers as we can, as fast as we can, as the IEPR  
2 highlighted, and we need to be attentive to the grid at the  
3 same time.

4           So we're trying to juggle these two. And I would  
5 say it's a titration and we welcome your input into that.  
6 And I would say you and I can't talk except in a public  
7 forum, so input into the staff on that, I think would be  
8 really helpful.

9           And I want to thank Benjamin for your leadership.  
10 He kind of stepped into this. It's been quite a year  
11 because AB 126 was passed right when we were in the middle  
12 of this, delaying everything. We thought we would have  
13 this report sooner for approval, but because of that, it  
14 was delayed. And you, Benjamin, of course are joined with  
15 others, Mabel and Charles, Patrick Brecht, there's a big  
16 team that has worked on this, so thanks to everybody. It  
17 really, it takes a village to put out this report.  
18 Hopefully next year we can streamline some of it but it's a  
19 lot of work.

20           And I just want to thank Bill Magavern for his  
21 leadership from Coalition for Clean Air. Bill has, as he  
22 said, he's been in the trenches since the first, since 2007  
23 probably, 2008, when the first version of this program was  
24 passed. And at the time it was revolutionary, and that was  
25 a long time ago, 2008.

1           And Adrian Martinez from the Disadvantaged  
2 Communities Advisory Group, Adrian, and together with Roman  
3 have been both really amazing leaders in the transportation  
4 space and have given us a lot of good. The whole DACAC has  
5 given us really great input.

6           I want to ask everybody here to spread the word  
7 on the openings for the Clean Transportation Advisory  
8 Program. I'm especially looking at my colleague down  
9 there, my fellow women power down this table, with your  
10 networks, because we want to make sure that it's a diverse  
11 group, that it really represents, you know, the swath of  
12 interests, including communities that want to get chargers  
13 in the ground, want to get more ZEV infrastructure, and are  
14 struggling with how to do it.

15           We actually did have a number of community  
16 members and they -- even they can serve and their  
17 organizations can get funding from the CEC but they as  
18 individuals cannot be named on applications, which is a  
19 little confusing for those who are, but we're happy to walk  
20 through. If you have community groups that might be  
21 interested, we'll walk through so they'll fully understand  
22 what it means to be on the committee. But definitely, this  
23 is the moment. It's only open for a few weeks, so we're  
24 accepting applications right now.

25           And I think as Benjamin said, this just sets

1 high-level funding amounts for each category. We're going  
2 to have to go into the solicitation process to really  
3 refine what that looks like. This is also very subject to  
4 the budget. As we all know, this is a tough budget year.  
5 You know, the numbers may change as we learn more in May  
6 and beyond about what the budget availability actually is.

7           So with that, I'll just say, you know, I think  
8 this is a great plan. I think it's taken a lot of -- as  
9 Benjamin said, there's a lot of community and stakeholder  
10 engagement. We listened to a lot of industry stakeholders,  
11 community stakeholders, nonprofit organizations in the  
12 development of this plan. It's very thoughtful and I think  
13 it does a good job of balancing interests.

14           CHAIR HOCHSCHILD: Well said.

15           CHAIR HOCHSCHILD: And, yes, Vice Chair.

16           VICE CHAIR GUNDA: Thank you. Thanks for the  
17 presentation. That was excellent, really helpful.

18           Thank you, Commissioner Monahan for, one, your  
19 leadership of the plan, but also kind of the request for  
20 the continue to think through on the grid readiness and how  
21 do we plan. I think I agree with you of the spirit of  
22 maximizing the opportunity for decarbonization and  
23 community benefits, you know, kind of electrifying as  
24 quickly as we can, but also figuring out how to match, you  
25 know, those electrons, you know, and that's kind of been a

1 tension for us on reliability, so that's kind of where --  
2 grid reliability, I mean, you know, kind of like thinking  
3 through.

4 I think it's more than anything just having that  
5 kind of transparency or kind of idea on where we are going  
6 so we can adequately make sure that's represented in the  
7 forecast, especially in the local distribution level, so it  
8 becomes a part of our visibility, so we know at least what  
9 we're getting at. So that will be really helpful.

10 And I wanted to use this opportunity to also just  
11 make a quick comment on the next one, because these go  
12 together with the Transportation Plan, and then kind of the  
13 chargers. It's again, same thing, which is, you know, to  
14 a point that Commissioner Monahan made maybe a year ago  
15 from the dais on really thinking about taking the  
16 forecasting and other planning processes we have and  
17 integrating the real boots-on-the-ground information that  
18 our investments yield and the opportunity of taking that  
19 intelligence into the planning processes for making  
20 products better. So I just wanted frame that.

21 I need to step out because I have a legislative  
22 appointment. But thank you and look forward to supporting  
23 this.

24 CHAIR HOCHSCHILD: Great.

25 Unless there's other comment?

1 Yes, Commissioner Gallardo.

2 COMMISSIONER GALLARDO: I'll be quick.

3 Benjamin, thank you for the presentation, and  
4 also the briefing. I wanted to note that the data that you  
5 shared up front about the impact that the Clean  
6 Transportation Program has had in California is extremely  
7 helpful. So I'm glad that, you know, there's intention  
8 around putting that up there.

9 And then I also have additional questions about  
10 the equity requirements, and also the workforce, which I'll  
11 follow up offline. Just wanted to give you and your team a  
12 heads-up that I'll be reaching out to you on that front.  
13 But thank you so much. This is fantastic.

14 Thank you, Commissioner Monahan, and I will send  
15 this out to all my networks.

16 CHAIR HOCHSCHILD: Okay, unless there's  
17 additional comments, I welcome a motion on item 14 from  
18 Commissioner Monahan.

19 COMMISSIONER MONAHAN: I move to approve this  
20 item.

21 CHAIR HOCHSCHILD: Is there a second from  
22 Commissioner Gallardo?

23 COMMISSIONER GALLARDO: I second.

24 CHAIR HOCHSCHILD: All in favor, say aye.  
25 Commissioner Monahan?

1 COMMISSIONER MONAHAN: Aye.

2 CHAIR HOCHSCHILD: Commissioner Gallardo?

3 COMMISSIONER GALLARDO: Aye.

4 CHAIR HOCHSCHILD: Commissioner McAllister?

5 COMMISSIONER MCALLISTER: Aye.

6 CHAIR HOCHSCHILD: Vice Chair Gunda?

7 VICE CHAIR GUNDA: Aye.

8 CHAIR HOCHSCHILD: And I vote aye as well.

9 And Vice Chair has to leave, but we'll power on.

10 For those of you on the dais, we've been going here, it's

11 3:10, it's totally fine to just stand up and stretch.

12 We're going to just power through because we've got still a  
13 ways to go.

14 So we'll turn now to item 15, Assembly Bill 2127  
15 Second Electric Vehicle Charging Infrastructure Assessment.

16 Welcome to Adam Davis.

17 MR. DAVIS: Good afternoon, Chair, Vice Chair and  
18 Commissioners. My name is Adam Davis. I'm staff in the  
19 Fuels and Transportation Division and I'll be presenting  
20 the AB 2127 Second Electric Vehicle Charging Infrastructure  
21 Assessment.

22 The staff draft of the second assessment was  
23 published in August and we presented the results at a  
24 workshop in early September. A revised version of this  
25 report incorporating stakeholder feedback on the staff

1 draft was published at the end of January.

2 Next slide, please.

3 The Assembly Bill 2127 Second Electric Vehicle  
4 Charging Infrastructure Assessment examines charging needs  
5 to support California's plug-in electric vehicles in 2030  
6 and 2035. AB 2127 requires the CEC to publish a Biennial  
7 Report on the charging needs of zero-emission vehicles by  
8 2030. In September 2020, the Governor directed the  
9 Commission to expand this analysis to 2035 and beyond.

10 On the light-duty side, the goal is to reach 100  
11 percent new vehicle ZEV sales by 2035 under the Advanced  
12 Clean Cars II regulations. On the medium- and heavy-duty  
13 side, the requirements vary substantially by segment under  
14 the Advanced Clean Trucks and Advanced Clean Fleets  
15 Regulations, with some vehicle types requiring 100 percent  
16 ZEV operations by 2035 and others by 2045.

17 The AB 2127 assessment focuses on charging needs  
18 for plug-in electric vehicles. In parallel, staff have  
19 developed the AB 8 and SB 643 reports on the fueling needs  
20 for hydrogen-powered ZEVs.

21 CEC staff performed the analysis for the AB 2127  
22 assessment in collaboration with researchers at the  
23 National Renewable Energy Lab, Lawrence Berkeley National  
24 Lab, and UC Davis. In the process of developing this  
25 report, we held public workshops on many of the individual

1 modeling components, as well as one to present the staff  
2 draft in early September. During and after these  
3 workshops, we received dozens of helpful comments from  
4 stakeholders. We incorporated this feedback into our  
5 modeling and discussion to produce the revised report,  
6 which we published last month.

7           Next slide, please.

8           For the second assessment, We updated the  
9 infrastructure model and scenarios for both light-duty  
10 vehicles and medium- and heavy-duty vehicles. For light-  
11 duty vehicles, projections have shifted away from short-  
12 duration public Level 2 charging to DC fast charging and  
13 longer-duration work Level 2 events. These changes reflect  
14 a market trend towards long-range battery electric vehicles  
15 and away from short-range battery electric vehicles and  
16 plug-in hybrids.

17           This change also aligns with the Advanced Clean  
18 Cars II Regulation, which allows fewer plug-in hybrids than  
19 we included in the scenarios for the first assessment, and  
20 required these vehicles to have considerably more electric  
21 range.

22           We also included a greater exploration of the gas  
23 station model alternative future scenario, which assumes  
24 that DC fast charging will be the preferred option for  
25 charging away from home.



1           For medium- and heavy-duty vehicles, this report  
2 includes fewer total M-D/H-D EVs in 2030. As well, more of  
3 these vehicles are in smaller and lower mileage classes.  
4 Pardon me. Vehicle efficiency is also assumed to be  
5 higher. These three effects together mean that less energy  
6 will be used per vehicle and overall.

7           The charging model has also been updated with new  
8 definitions for depot charging and enroute charging.

9           Beyond this, the report has an updated analysis  
10 of grid topics, which is covered both by the EDGE model and  
11 by a chapter on vehicle grade integration.

12           And finally, there's a new chapter on labor and  
13 workforce development aspects of electric vehicle charging  
14 as required by SB 589.

15           Next slide, please.

16           This slide shows the size of the light-duty EV  
17 fleet used for the highest scenario -- or pardon me, for  
18 the high scenario in the first AB 2127 assessment which was  
19 based on CARB's mobile source strategy, and for the primary  
20 scenario in the second assessment which is the AATE3  
21 scenario from the IEPR. For 2030 the new assessment has a  
22 slightly smaller number of light-duty EVs overall, but an  
23 increase in the number of battery electric vehicles,  
24 especially long-range BEVs. By 2035, the total number of  
25 EVs is higher than in the first assessment, and BEVs make

1 up an even larger share.

2 Next slide, please.

3 This slide shows the number of chargers our  
4 models project will be needed to support light-duty  
5 vehicles in California in 2030 and 2035.

6 CHAIR HOCHSCHILD: Can I ask a question on that,  
7 which is --

8 MR. DAVIS: Sure.

9 CHAIR HOCHSCHILD: -- you know, there's these  
10 different categories but, you know, one of the things we've  
11 been supporting is an EV match, right, which is basically  
12 like the Airbnb for private EV chargers. So do we track  
13 like that category? It's not like a corporate-owned  
14 parking lot that's sort of -- but it's like owned by a  
15 private individual but made available to the public? Is  
16 that a category we track or try to track?

17 MR. DAVIS: So I can't speak to, specifically,  
18 that specific category. But I do know that the accounting  
19 charges effort does track shared private charges, which  
20 that would seem to be included in.

21 CHAIR HOCHSCHILD: Yeah.

22 MR. DAVIS: But I don't know whether that  
23 specific use case is included in there yet.

24 CHAIR HOCHSCHILD: Okay. Okay. I would love it  
25 if we can look into that. That would be helpful. Thanks.

1 MR. DAVIS: Thanks.

2 So again, this slide shows the number of chargers  
3 that our models predict will be needed to support light-  
4 duty vehicles in California in 2030 and 2035. This  
5 assessment counts chargers that are public or shared  
6 private, which includes lower-speed chargers at multifamily  
7 housing, work, and public locations, and higher-speed  
8 chargers at public locations and long, long-distance travel  
9 corridors.

10 Charger needs will be impacted by the types of  
11 vehicles on the road and by the mix of slow and fast  
12 chargers. Level 2 chargers account for the bulk of  
13 charging overall, and are primarily located at places where  
14 people spend a lot of time, so think home and work. High-  
15 powered direct current fast charging will be increasingly  
16 important, however, as long-range battery electric vehicles  
17 make up a larger share of the fleet, as well as for people  
18 who do not have convenient charging at home or at their  
19 workplace.

20 Next slide, please.

21 In addition to the main scenario, we developed  
22 alternative future scenarios for 2030 that are built around  
23 specific changes to PEV charging priorities or policy. One  
24 of these scenarios reflects an increased preference for  
25 fast charging, mirroring how internal combustion engine

1 vehicle refueling is currently done at centralized  
2 locations. Under the baseline scenario, drivers use DC  
3 fast charging if it's the only option that works in their  
4 schedule.

5 Under the gas station model scenario, DC fast  
6 charging is the first choice of all drivers who aren't able  
7 to charge at home and some home charging demand shifts to  
8 DCFC as well. In this scenario, installing an additional  
9 63,000 DC fast chargers would eliminate the need for about  
10 400,000 Level 2 chargers at public and workplace locations.  
11 Under this scenario, nearly two-thirds of all light duty  
12 vehicle charging is done at DCFC compared to about a  
13 quarter in the base case.

14 Next slide, please.

15 This slide shows the growth in charging  
16 infrastructure need and corresponding power levels for  
17 medium- and heavy-duty vehicles in 2030 and 2035. This  
18 assessment includes two general categories of chargers for  
19 M-D/H-D vehicles, depot chargers, which include all types  
20 of chargers at existing truck destinations, including  
21 chargers at conventional depots, shared charging locations,  
22 and chargers installed at existing destinations like  
23 warehouses, and then en-route chargers, which are  
24 exclusively high-speed chargers installed on major travel  
25 corridors to allow vehicles to complete long-distance

1 trips.

2 More depot chargers are needed than en route  
3 because depot charging allows vehicles to make the best use  
4 of vehicle idle time, to avoid waiting for charging during  
5 the trip, and to avoid having to pay for high-powered en  
6 route charging. Depot chargers include a range of charging  
7 speeds with larger vehicles and batteries requiring higher-  
8 speed depot charging. En-route charging speeds depend  
9 largely on vehicle technology.

10 Next slide, please.

11 We also included an alternative feature scenario  
12 for M-D/H-D. This scenario allows for higher speed  
13 charging at depots. For example, a Tesla Semi in PepsiCo's  
14 Sacramento fleet ran more than 1,000 miles in a single day  
15 using high-speed depot charging. This highlights the range  
16 of possibilities as we see rapid deployment of MDHD  
17 electric vehicles. We'll be watching these developments.  
18 as we do future modeling and analysis.

19 Next slide, please.

20 Finally, I'll show you the load curve for  
21 electric vehicle charging on a typical weekday in 2030  
22 under the primary scenario. As EV ownership expands,  
23 vehicle charging will make up an increasing share of  
24 California's energy demand. Coordinated investments in the  
25 grid and charging infrastructure will support charging and

1 community needs locally and statewide. This analysis is  
2 included in the AB 2127 assessment so that we can  
3 understand not just where chargers will be needed, but  
4 where and when energy will be needed, which will help us  
5 plan for grid upgrades.

6 For light-duty vehicles, about half of all  
7 charging is done at-home chargers, and the rest is split  
8 between Level 2 chargers at public -- or pardon me, and the  
9 rest is split between Level 2 chargers at public and work  
10 locations and DC fast chargers. Home charging happens  
11 mostly during the night, and non-home charging happens  
12 mostly during the day. This report includes several  
13 alternative future scenarios that explore the impact of  
14 shifting charging load between locations and times of day.  
15 For medium- and heavy-duty vehicles, depot charging makes  
16 up about 82 percent of total charging load and en-route  
17 chargers provide the rest.

18 Next slide, please.

19 Finally, we're asking you to approve these  
20 findings and support the publication of a commission report  
21 for the AB 2127 second electric vehicle charging  
22 infrastructure assessment.

23 Thank you so much for your time. I'm happy to  
24 answer any questions you have about this report.

25 CHAIR HOCHSCHILD: Thank you so much.

1           Let's go to public comment.

2           MS. BADIE: Thank you.

3           The Commission welcomes public comment on item 15  
4 at this time. And if you're in the room with us, we've  
5 asked folks to use the QR code. You can also wave your  
6 hand. I will see you. And if you're joining by Zoom,  
7 please use the raise-hand feature on your screen. It looks  
8 like an open palm. And if joining us by phone, please  
9 press star nine.

10           And I'm not seeing any hands in the room or on  
11 Zoom. Chair, back to you.

12           CHAIR HOCHSCHILD: All right, let's go to  
13 Commissioner discussion, starting with Commissioner  
14 Monahan.

15           COMMISSIONER MONAHAN: Well, I want to say that  
16 I've often looked at EAD with a little jealousy because of  
17 their analytical arm. But now FTD has been like really  
18 building that muscle around analysis. And it integrates  
19 well with the work that the Vice Chair is shepherding in  
20 terms of like, well, how do we make sure we have a safe,  
21 reliant, resilient grid and as we integrate all these  
22 electric vehicles?

23           And I think you've heard Adam. I mean, he knows  
24 what he's talking about. He's published papers. He's very  
25 smart and has been a key lead in this project. But there

1 are others in the room I can see who have also been  
2 involved. And I just want to thank the leadership for --  
3 the leadership of the Fuels and Transportation Division for  
4 really taking this one seriously.

5 This is the talking point I use more than any  
6 other one over the next two years. I'm going to be saying,  
7 you know, we're going to need over, you know, about a  
8 million chargers for light-duty vehicles, and I'm going to  
9 say that over and over and over again. And so -- and it  
10 comes from this analysis.

11 I also want to recognize that this is a moment of  
12 change. And just like we heard today with the Demand  
13 Forecast, like, well, what's really going to happen with  
14 solar uptake? We have the same struggle in terms of what's  
15 really going to happen with mega charging? You know, we  
16 see what's happening at the Pepsi factory here in  
17 Sacramento. They're using the Tesla Semi. They're  
18 charging a 500 mile range Tesla in under an hour. So we're  
19 talking some serious -- and it's at a depot. So we're  
20 learning as we go.

21 And this is something that we're going to be  
22 monitoring the market. We have the best analytical team in  
23 terms of research institutions across the country engaged  
24 in this. So, you know, nobody is doing as good analysis as  
25 we are, I would say, it's fair to say. And we need this in



1 order to plan appropriately to build out chargers, to  
2 integrate with the grid.

3 So I just want to thank everybody who was  
4 involved in this project. And again, like thank you for  
5 the talking points. You'll hear me say it over and over.

6 CHAIR HOCHSCHILD: Thank you.

7 Unless there is Commissioner discussion, I  
8 welcome a motion from Commissioner Monahan on item 15.

9 COMMISSIONER MONAHAN: I move to approve item 15.

10 CHAIR HOCHSCHILD: Is there a second from  
11 Commissioner McAllister?

12 COMMISSIONER MCALLISTER: Second.

13 CHAIR HOCHSCHILD: All in favor say aye.

14 Commissioner Monahan?

15 COMMISSIONER MONAHAN: Aye.

16 CHAIR HOCHSCHILD: Commissioner McAllister?

17 COMMISSIONER MCALLISTER: Aye.

18 CHAIR HOCHSCHILD: Commissioner Gallardo?

19 COMMISSIONER GALLARDO: Aye.

20 CHAIR HOCHSCHILD: And I vote aye as well. That  
21 item passes four to zero.

22 I know Commissioner Monahan has to depart  
23 shortly.

24 COMMISSIONER MONAHAN: I think I can do the next  
25 item

1 CHAIR HOCHSCHILD: Okay. Great.

2 COMMISSIONER MONAHAN: And then I have to go.

3 CHAIR HOCHSCHILD: We'll keep going ahead then.

4 Let's turn to item 16, Department of the Air Force.

5 Mike Gravely.

6 MR. GRAVELY: Good afternoon, Director and  
7 Commissioner. I'm Mike Gravely, the Military Advisor to  
8 the Chair. I'm here today to bring before you an MOU  
9 between the Air Force and Energy Commission.

10 Next slide.

11 The Department of Defense plays a big role in the  
12 economy of California. California has more bases and more  
13 active duty personnel than any other state in the Union.  
14 The Governor's Office tracks the Department of Defense as  
15 national security, which is Department of Defense, Homeland  
16 Security, and Veterans Affairs. And it represents almost  
17 five percent of the California's economy. And obviously,  
18 the Department of Defense is by far the largest element of  
19 that five percent.

20 Next chart.

21 We have a long history of working with the Air  
22 Force. This project here at L.A. Air Force Base goes back  
23 over a decade. We did, many years ago, what was probably  
24 the most creative and largest vehicle-to-grid demonstration  
25 on L.A. Air Force Base. It involved 43 vehicles, both

1 sedans and medium-duty vehicles. We were successfully able  
2 to demonstrate vehicle-to-grid operations with the ISO in a  
3 utility for 18 months. Turns out the Department of Defense  
4 had six bases within the nation that were doing these  
5 demonstrations. Only L.A. Air Force Base was able to  
6 successfully connect to the grid and participate. The  
7 other bases were either shut down early or were only aided  
8 to simulate.

9           The Department of Defense staff who worked this  
10 project will tell you clearly the reason L.A. Air Force  
11 Base was successful was the partnership with the CEC and  
12 the help we provided them with the utility and the ICEL.

13           Next chart.

14           We also have a MOU right now with the Navy that  
15 goes back to 2016. This picture shows the Commissioner  
16 Hochschild and Ms. Berger (phonetic) signing back in 2021.  
17 But again, we have a large history of working together on  
18 projects that are mutually beneficial to both the military  
19 and the Energy Commission and the state.

20           Next chart.

21           Just to give you a couple of examples, on the  
22 left is Miramar, an aerial view of Miramar Air Force Base,  
23 which is probably the most comprehensive and most  
24 impressive military microgrid -- military microgrid in the  
25 country. That microgrid can support military flight

1 operations for 21 days. And back in '22, when we had the  
2 summer heat wave, they actually provided substantial load  
3 reductions every day for eight days straight to support the  
4 grid and help us keep the grid operating.

5 On the right is another microgrid on the Navy  
6 base that has a very a sensitive classified facility that  
7 does data management. And the challenge they have is when  
8 they shift from grid power to backup power, they lose a lot  
9 of their facilities within the building and they have to go  
10 through the building one by one and restart it. This  
11 facility will provide them clean power and they will avoid  
12 those issues when they transfer back and forth.

13 Next chart.

14 The MOU allows us to work all the areas that are  
15 a focus of the CEC. Another couple of few examples of work  
16 we've done, Edwards Air Force Base just recently  
17 commissioned a 1,300 megawatt PV system, which is the  
18 largest DoD private partnership in the country.

19 L.A. Air Force Base is continuing their work with  
20 us. We have an EPIC grant there and they're providing  
21 funding and they're going to make L.A. Air Force Base the  
22 first all zero-emission vehicle base in the country. They  
23 believe that's the goal they're working for.

24 We have work we're doing with Vandenberg Air  
25 Force Base on offshore wind and green hydrogen production.

1 And we have experience with Beale Air Force Base on grid  
2 reliability, energy efficiency, and load reduction.

3 Next chart.

4 The MOU does provide very specific benefits for  
5 us, and mostly it aligns with communications from the  
6 headquarters down to the base level and the people for us  
7 to work with and be able to resolve issues. It allows us  
8 to prioritize projects and to get the support we need when  
9 a project needs resources.

10 One area that a significant benefit is when we do  
11 these projects, we do them only with the local base  
12 commander, and the base commander is happy to do these  
13 projects, but they feel like they're doing an Air Force-  
14 level project without any Air Force-level involvement, and  
15 they feel like they're risking their careers by doing  
16 things that maybe the bosses don't want. This MOU provides  
17 clear direction, clear communications, and takes that  
18 problem off the table so that base commanders can feel  
19 comfortable that what they're doing is supporting not only  
20 themselves but the larger Air Force.

21 And again, at the end of the day, it allows us to  
22 go after federal funds, both DOE funds and other funds, and  
23 work together on projects so we can maximize the  
24 opportunity, both for the state and for the federal  
25 government, and it allows us to do creative projects that

1 are beneficial to both sides of the table.

2 Next chart.

3 With that, I'm asking for approval for the Chair  
4 to sign the MOU with the Air Force Secretary, Assistant  
5 Secretary, at a date in the future to be arranged and allow  
6 us to operate this MOU for the next five years.

7 CHAIR HOCHSCHILD: Yeah. Thank you so much.

8 I did want to just begin -- oh sorry, let's do  
9 public comment, if there is any.

10 MS. BADIE: Thank you.

11 The Commission now welcome public comment on item  
12 16. If you're in the room with us, we're asking folks to  
13 use the QR code to let us know. And if you are on Zoom,  
14 please use the raise-hand feature, and if joining by phone  
15 press star nine. And just giving that a moment here.

16 No raised hands for this item. Back to you,  
17 Chair.

18 CHAIR HOCHSCHILD: Yeah, I did want to just begin  
19 by thanking Commissioner McAllister and Commissioner  
20 Gallardo who each joined me for different parts of our  
21 military confab a few weeks ago with Mike Gravely and a  
22 number of admirals and generals from the Marine Corps and  
23 the Navy. Really fruitful discussion and very, very  
24 substantive. So thanks to you both for participating and  
25 sharing your insights with our military counterparts.

1           I am thrilled to support this. Air Force, we  
2 have not done as much with relative to the Navy, but that  
3 project, which probably been seven or eight years ago now,  
4 the L.A. Air Force Base project has really put the vehicle-  
5 to-grid on the on the map. So I am thrilled to support  
6 this.

7           And unless there's other comments, I'd welcome a  
8 motion on item 16 from Commissioner Gallardo.

9           MR. GRAVELY: Just a quick comment.

10          Thank you so much, Mike, for your leadership on  
11 the military affairs. I think you're helping us develop  
12 these relationships, which I've really grown to appreciate  
13 further in terms of the nuance and how, you know, deep of  
14 an impact we can make. And also, thank you for explaining  
15 the sensitivities and the importance of the MOU.

16          So I am really excited about this, as well, so  
17 I'll move to approve this item.

18          CHAIR HOCHSCHILD: Is there a second from  
19 Commissioner McAllister?

20          COMMISSIONER MCALLISTER: Second.

21          CHAIR HOCHSCHILD: All in favor, say aye.

22          Commissioner Gallardo?

23          COMMISSIONER GALLARDO: Aye.

24          CHAIR HOCHSCHILD: Commissioner McAllister?

25          COMMISSIONER MCALLISTER: Aye.

1 CHAIR HOCHSCHILD: Commissioner Monahan?

2 COMMISSIONER MONAHAN: Aye.

3 CHAIR HOCHSCHILD: And I vote aye as well. Item  
4 16 passes four to zero.

5 Thank you, Mike.

6 MR. GRAVELY: Thank you.

7 CHAIR HOCHSCHILD: We'll turn now to item 17,  
8 California Clean Energy Fund, CALCEF Ventures.

9 MS. OSMAN: Hello. Good afternoon, Chair and  
10 Commissioners. I'm Ayat Osman, an Electric Generation  
11 Systems Specialist in the Research and Development  
12 Division.

13 I am here before you today to present for your  
14 approval, six small grant awards under the CALCEF  
15 initiative, which is under the EPIC Program funding.

16 Next slide, please.

17 Since its inception in 2017, CalSEED has awarded  
18 \$32 million to 143 clean energy startups with innovative  
19 technologies. To date, these companies have garnered over  
20 \$214 million in various types of follow-on funding.  
21 Additionally, four companies have been acquired and three  
22 have completed Series A, B, C funding rounds.

23 The growth of these small businesses can also be  
24 measured in terms of an increase in career opportunities,  
25 technology ownership rights, advancement on technology



1 readiness level, and successful small-scale validation of  
2 the unique technologies.

3 In reflection of the CEC commitment to diversity,  
4 CalSEED actively conducts outreach to ensure that the  
5 applicant's pool is representative of all Californians,  
6 including women, low-income entrepreneurs, veterans,  
7 communities of color, and other underrepresented groups.

8 Next slide, please.

9 CalSEED provides small grants to entrepreneurs  
10 with early-stage clean energy technologies. Applicants  
11 first apply for a \$200,000 Concept Award, which also comes  
12 with access to technical resources and business development  
13 expertise.

14 Additionally, those that receive a Concept Award  
15 participate in Clean Tech Open Accelerator Program in which  
16 they develop a business plan and are invited to compete for  
17 500,000 additional dollars via a follow-on prototype award  
18 to further develop their innovation. As a note, since  
19 2017, the award amounts were \$150,000 and \$450,000, but  
20 have been adjusted to inflation.

21 Next slide, please.

22 There were a total of 12 participants in this  
23 most recent business plan competition. Today, we will  
24 present the top six competitors for consideration to  
25 receive the prototype award. These participants attended

1 Clean Tech Open Annual Western Region Accelerator,  
2 developed a business plan while furthering their  
3 technological progress, and then competed in a business  
4 plan competition last year.

5 Next slide, please.

6 Community Energy Lab is a software as a service  
7 control platform for building operators who find it  
8 complex, frustrating, and expensive to meet building energy  
9 mandates using standard building control options. This  
10 software is powered by machine-learning algorithms to  
11 predictively operate the building while taking into account  
12 a physical structure of the building, user inputs,  
13 utilities, prices, and data-derived insight. They have  
14 already tested their solution in 21 pilot locations and  
15 hope to use this \$500,000 prototype award to improve the  
16 user-friendliness and affordability of their offering.

17 Next slide, please.

18 iFAST, our next prototype awardee, has an  
19 exciting vanadium-based lithium-ion battery technology for  
20 heavy-duty vehicles. Heavy-duty vehicles are used  
21 throughout the day and have high power needs. This differs  
22 from a normal car, which only needs to be charged around  
23 once a week. iFast technology delivers 10 times faster  
24 charger over 10,000 cycles and is able to operate in a wide  
25 variety of temperatures.

1           During the CalSEED Concept Award, the team  
2 demonstrated the technology at a small scale and showed the  
3 high cycle life. They also interfaced with customers to  
4 confirm this battery technology fit their needs. In this  
5 prototype award, iFAST will create larger patch cell  
6 batteries and validate the performance with a third party.

7           As a note, one technical scorer on CalSEED panel  
8 called this one, one of the strongest technologies he has  
9 ever seen come out of CalSEED.

10           Next slide. Next slide, please.

11           So Solvari SR is an all-in-one solar panel for  
12 residential roofs that is delivered to the home with  
13 everything needed to install, which installs three times  
14 faster than current technologies. The cost is also reduced  
15 as much as 25 percent from reduced complexities in  
16 logistics and installation.

17           And the previous CalSEED Concept Award, the team  
18 validated key aspects of the design and conducted customer  
19 discoveries to ensure that the product would be successful.  
20 In this project, the team will work to achieve UL  
21 certifications and will work to automate part of their  
22 manufacturing process.

23           Next slide, please.

24           REI Energy. REI has a grid-scale zinc-based  
25 battery technology that is able to inhibit dendrite

1 formations. In the prior Concept Award, they demonstrated  
2 over 2,800 cycles with an efficiency of 99.5 percent. This  
3 represents an over 50 percent increase in cycle life  
4 compared to the zinc-based technology. In this project,  
5 the team will work to increase the charge capacity and  
6 create a minimum viable product that can be shown to  
7 potential customers and investors.

8           Next slide, please.

9           Aeromutable Corporation is a technology that  
10 actively changed the aerodynamic signature of a tractor  
11 trailer to minimize drag and reduce energy consumption when  
12 it's driven in highway speed. It does this by injecting  
13 air at the back of the trailer in a unique way and can  
14 extend range in an electrified heavy-duty vehicles by up to  
15 16 percent. In the prior \$150,000 Concept Award, the team  
16 developed in-house testing procedures to enable dynamic  
17 charging of the air signature based on what the truck is  
18 doing. In this project, the team will continue to test,  
19 will work with potential customers throughout the pilot.

20           Climformatics -- next slide. Next slide, please.

21           Climformatics uses climate data and machine  
22 learning to predict localized extreme climate, fire  
23 weather, solar power, and net load to a year in advance  
24 with great accuracy, providing actionable climate smart  
25 enhanced risk resilience, and empower utilities to

1 proactively prepare and protect their installations. This  
2 technology is designed to bridge the gap between short-term  
3 weather and long-term climate modeling technologies. The  
4 team has validated its one-year-ahead fire weather  
5 forecast, and has also found that their one-year-ahead  
6 temperature and wind speed forecasts outperform many  
7 industrial leaders. In this project, the team will create  
8 a minimum viable product and will collaborate with CAL FIRE  
9 to develop a machine learning algorithm that informs fire  
10 danger and heat stress forecast.

11 Next slide, please.

12 We recommend approval of these six grant awards  
13 and adoption of the staff finding that these projects are  
14 exempt from CEQA.

15 Before we conclude, we would like to take a  
16 second to recognize all the great work being done by New  
17 Energy Nexus. They have been proactive and throughout --  
18 and thoughtful administrators of the CALCERF initiative,  
19 and we would like to extend a big thank to them for their  
20 continued efforts.

21 Staff is available for questions, and a member  
22 from New Nexus should also be online.

23 Thank you for your time today.

24 CHAIR HOCHSCHILD: Thank you so much. Great  
25 presentation.

1 I did want to ask one thing. I noticed we're  
2 doing \$500,000 awards. Before we were doing \$450,000;  
3 right?

4 MS. OSMAN: Yeah, there was --

5 CHAIR HOCHSCHILD: So are we increasing the  
6 initial awards from \$150,000 to \$200,000 as well?

7 MS. OSMAN: Yeah.

8 CHAIR HOCHSCHILD: Yes. Okay. Great. I think  
9 that's really warranted with inflation and so forth, so  
10 thank you for that.

11 Let's go to public comment if we could.

12 MS. BADIE: The Commission welcomes public  
13 comment on item 17 at this time. We'll start with folks in  
14 the room. We're asking folks to use the QR code to let us  
15 know that they'd like to make a comment. And if you're  
16 joining by Zoom, please start raising your hands. You'll  
17 see an open-palm symbol on your screen, or you can press  
18 star nine if joining by phone.

19 So in the room we have with us, Dr. Subarna  
20 Bhattacharyya.

21 And, Dr. Subarna, if you want to approach the  
22 podium, please spell your name for the record. And we're  
23 asking for comments to be two minutes or less. Thank you.

24 DR. BHATTACHARYYA: Thank you. Good afternoon,  
25 chair, Commissioners, and the Energy Commission. New

1 Energy Nexus. (Indiscernible), thank you. I am Subarna  
2 Bhattacharya, S-U-B-A-R-N-A B-H-A-T-T-A-C-H-A-R-Y-Y-A, co-  
3 founder and CEO of Climformatics.

4 At Climformatics, our unique offering is to be  
5 able to deliver accurate, hyper-local forecasts of extreme  
6 climate a year ahead. Climformatics fills the gap between  
7 weather and the climate. With the CalSEED prototype award,  
8 we would like to bring you prototype products for fire  
9 weather, solar power, net load forecasting, and help them  
10 to bring to market, as well as we want to build an  
11 innovative decision support technology for the energy  
12 utilities and grid operators to help them decide  
13 particularly complex, compound, contemporaneous climate  
14 events, like the heat wave and the fire weather happening  
15 together.

16 So on one hand, we need to provide enough energy  
17 for air conditioning increase, you know, increasing air  
18 conditioning. On the other hand, we have to be mindful  
19 that the high winds can drive the fire weather and  
20 utilities might need to shut off power. So where and how  
21 to organize this distribution of energy and plan it well  
22 ahead of time to mitigate the risks and keep the damages to  
23 a minimum, that is the product we want to build and bring  
24 to the market.

25 We are humbled by the trust that you bestow on

1 us, and we are grateful for all your support in helping us  
2 to develop and bring this critical technology to market  
3 that has the capability of disrupting the trajectory of  
4 climate sustainability, disaster preparedness, and climate  
5 resilience. Our massive transformative purpose is to be  
6 able to help humanity prepare, protect, and adapt to the  
7 inescapable challenges of climate change.

8 Thank you for your support.

9 CHAIR HOCHSCHILD: Thank you so much.

10 MS. BADIE: Thank you.

11 And we'll now transition to Zoom.

12 Joy Larson, I'm going to open your line. If you  
13 can please spell your name for the record? We're asking  
14 for comments to be two minutes or less.

15 MS. LARSON: Hi. Good afternoon. My name is Joy  
16 Larson, that's J-O-Y L-A-R-S-O-N. I'm the Director of the  
17 CalSEED Program at New Energy Nexus.

18 In this competition, there is scoring criteria  
19 for public funding impact. And I wanted to highlight this  
20 for a moment because, you know, there's not a lot of  
21 private funding for technology development at these early  
22 stages. And so these public funds will support these six  
23 companies that have demonstrated not only technical promise  
24 for decarbonization, but also some additional social  
25 benefits.



1           So for example, the batteries being developed by  
2 Aria and Tyfast and Aeromutable's control technology for  
3 trucks and Climformatic's decision support tool all have  
4 characteristics of the products that are designed  
5 specifically to increase safety and reliability. Community  
6 Energy Labs in Solvari are developing products with  
7 specific features that make using the technology easier and  
8 that increases access to clean energy for people who might  
9 not otherwise have it. So increasing safety, reliability  
10 and access are all social impacts from scaling these  
11 technologies that kind of go above and beyond just cost  
12 savings and reducing emissions.

13           And for that, the team at New Energy Nexus is  
14 proud to partner with the CEC to help advance these  
15 technologies. I'd like to thank Josh Croft, Savi  
16 (phonetic) Ellis, Anthony Negg (phonetic) for their  
17 continued support and collaboration. I'd like to give a  
18 special thank you to Clean Tech Open for their ongoing  
19 partnership and to each of the judges who scored  
20 applications and pitches. The CalSEED Team at New Energy  
21 Nexus is looking forward to working with these six  
22 companies and also to the next public solicitation coming  
23 up in April.

24           Thank you very much.

25           MS. BADIE: Thank you.

1           Next, we'll hear from David Manosalvas-Kjono.

2           I'm going to open your line, David. Please spell  
3 your name for the record. We're asking for comments to be  
4 two minutes or less.

5           MR. MANOSALVAS-KJONO: Hi. My name is David  
6 Manosalvas-Kjono, spelled D-A-V-I-D M-A-N-O-S-A-L-V-A-S  
7 hyphen K-J-O-N-O. I am the co-founder and CEO of  
8 Aeromutable.

9           As you guys have heard, at Aeromutable, we're  
10 bringing aerospace technology into the trucking industry.  
11 And our first product is a device capable of reducing fuel  
12 and energy consumption, as well as decreasing emissions  
13 three times better than anything currently in the market,  
14 because it's an active system.

15           I want to thank the California Energy Commission  
16 for their support through the CalSEED Prototype Award of  
17 all these great technologies in the past, as well as for  
18 the consideration on this new award. This Prototype Award  
19 will enable us to accelerate our technological development  
20 and entry to market.

21           To give you guys an idea, just the one percent  
22 market penetration in California alone of our technology  
23 translates into savings of over 226 gigawatt hours, which  
24 is the equivalent of powering over 20,000 American homes  
25 per year, as well as a reduction of over 46,000 metric tons

1 of CO2 being produced that otherwise would have been  
2 produced to generate the electricity required to power  
3 electric semi-trucks. That scales up significantly when  
4 thinking about the current diesel semi-trucks.

5 As a company that's changing the aerodynamic  
6 behavior of vehicles, our technology is power plant  
7 agnostic. So it operates for diesel, it works for  
8 electric, it works for hydrogen, it works for natural gas.  
9 And we are really looking forward to bringing this  
10 technology into the world and being able to impact the  
11 transition here in California and the U.S. and continue  
12 moving further from that.

13 Thank you so much for your consideration and  
14 funding this award.

15 MS. BADIE: Thank you.

16 Next, we have CEL Customer Success.

17 If you could please -- I'm going to open your  
18 line. If you could please state and spell your name for  
19 the record? We're asking for comments to be two minutes or  
20 less.

21 MS. PEREDO: Good afternoon. My name is Rebecca  
22 Peredo, R-E-B-E-C-C-A P-E-R-E-D-O, and I'm with Community  
23 Energy Labs.

24 On behalf of my team and the customers that we  
25 serve, I wanted to thank the CEC for supporting programs

1 and initiatives, such as CalSEED, that help turn good ideas  
2 into new companies. The majority of our customers are  
3 school districts looking to reduce their energy consumption  
4 and carbon emissions, but this is not their core business.  
5 With the CalSEED Prototype Award, we plan to build support  
6 tools that smooth customer acquisition and onboarding in a  
7 friendly, consistent, and scalable way, allowing us to  
8 serve more communities. These enhancements are central to  
9 supporting CEL's go-to-market strategy and ability to  
10 convert and create scalability --

11 CHAIR HOCHSCHILD: I'm sorry, ma'am, we lost you.  
12 Can you hear us?

13 MS. PEREDO: -- and your support. Thanks.

14 CHAIR HOCHSCHILD: Okay.

15 MS. BADIE: Thank you. We lost a little bit of  
16 the audio at the end, but we caught most of your comment.  
17 Thank you for your comment.

18 And that concludes public comment. There's no  
19 other raised hands. Chair, back to you.

20 CHAIR HOCHSCHILD: All right. Well, I am very  
21 pleased to -- it would help if I turned the mic on.

22 I just want to say I always like to see these.  
23 You know, Commissioner McAllister and I are fortunate to  
24 serve as leads for R&D investments for the Energy  
25 Commission and just always such a source of hope and

1 inspiration, all these terrific new innovators and  
2 entrepreneurs, and really well crafted.

3 I do want to especially thank New Energy Nexus  
4 for being a wonderful partner with the Energy Commission on  
5 this program, and it's just a wonderful, wonderful program.

6 So let me just turn it over to Commissioner  
7 McAllister for any additional comments.

8 COMMISSIONER MCALLISTER: I want to just  
9 reinforce, I mean, we are so lucky to live in a state with  
10 all these great ideas and to have a have a facility that we  
11 can use to sort of stage investment from early and then  
12 sort of nurture technology development. And, you know,  
13 this is a great group of projects, really relevant across  
14 the board in many different -- you know, in several  
15 sectors.

16 So just really thanks for the presentation and  
17 the detailed explanation. It's really appreciated. And  
18 just shout out to Jonah and the whole team for all their  
19 work on this front.

20 CHAIR HOCHSCHILD: Commissioner Gallardo?

21 COMMISSIONER GALLARDO: Great, great job on the  
22 presentation in the briefing. Thank you for the whole  
23 team, Anthony as well.

24 I want to highlight that one of the things I  
25 really appreciated is showing the investments made in small

1 businesses, women-owned businesses, and also other diverse-  
2 owned businesses. I think that's really important to show  
3 that, you know, we're also creating all these  
4 opportunities. And Energy Commission did make a commitment  
5 back in 2015 to ensure that we're increasing opportunities  
6 on supplier diversity. Here we're showing it, so  
7 appreciate that. And I encourage you to continue showing  
8 that type of impact.

9           And Rebecca, Subarna, David, thank you so much  
10 for your time here, and also for all the great work you're  
11 doing. I was really excited about all of these  
12 technologies. We're constrained on time, otherwise I'd  
13 rave in detail about each of them. So just overall, great  
14 work and thank you.

15           And, Chair, that's my final comment.

16           CHAIR HOCHSCHILD: Okay, with that, I would  
17 welcome a motion on item 17 from Commissioner McAllister.

18           COMMISSIONER MCALLISTER: Move item 17.

19           CHAIR HOCHSCHILD: Is there a second from  
20 Commissioner Gallardo?

21           COMMISSIONER GALLARDO: I second.

22           CHAIR HOCHSCHILD: All in favor, say aye.

23           Commissioner McAllister?

24           COMMISSIONER MCALLISTER: Aye.

25           CHAIR HOCHSCHILD: Commissioner Gallardo?

1 COMMISSIONER GALLARDO: Aye.

2 CHAIR HOCHSCHILD: And I vote aye as well. Item  
3 17 passes three to zero. Thank you so much.

4 We'll turn now to item 18, minutes from the  
5 January 24th, 2024 business meeting.

6 Any public comments on item 18?

7 MS. BADIE: The Commission now welcomes public  
8 comment on item 18 on the agenda. If you're in the room,  
9 please use the QR code. And if you are on Zoom, please  
10 raise your hand. If you're joining by phone, press star  
11 nine. And I'm just going to give that a brief moment here.

12 Not seeing any comments. Back to you,  
13 chair.

14 CHAIR HOCHSCHILD: All right. Unless there's  
15 discussion, Commissioner McAllister, would you be willing  
16 to move item 18?

17 COMMISSIONER MCALLISTER: Move item 18.

18 CHAIR HOCHSCHILD: Is there a second?

19 COMMISSIONER GALLARDO: I second.

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

22 COMMISSIONER MCALLISTER: Aye.

23 CHAIR HOCHSCHILD: Commissioner Gallardo?

24 COMMISSIONER GALLARDO: Aye.

25 CHAIR HOCHSCHILD: And I vote aye as well. Item

1 18 passes 3 to 0.

2           Item 19, Lead Commissioner and Presiding Member  
3 Reports, starting with Commissioner McAllister.

4           COMMISSIONER MCALLISTER: Well, I'll be very  
5 quick, but I just wanted to reinforce your message about  
6 the military collaboration, in particular our visit south  
7 to the Navy, just a lot of great stuff happening there.  
8 And they're such innovators. Just it's a great  
9 partnership, so really excited to support all of that.

10           And the Stanford Energy Summit a couple weeks  
11 ago, went down with the Chair, and that's an annual event  
12 that really, I think, highlights a whole ton of different  
13 issues that we're facing, moderated a panel on data, which  
14 I think continue to just show how much good thinking there  
15 is on that. I'm super excited about a bunch of initiatives  
16 we have here at the Commission and made some great context  
17 there.

18           But just the Bay Area innovation ecosystem, and  
19 then certainly Stanford that has a lot of resources to  
20 bring to support these kinds of things, that event was  
21 great last year, this year, and I think will be even bigger  
22 and better in future years.

23           So last thing, I just spent last week at the  
24 NASEO Energy Policy Outlook Conference in D.C. And most of  
25 the -- a lot of the conversation revolved around all the



1 DOE funds, the HOMES and HERA and all the different IRA,  
2 Inflation Reduction Act, programs. And just wanted to give  
3 a shout out to Jen Martin-Gallardo and the whole team,  
4 Christine, Deanna in REDI, and the Efficiency Division  
5 chipping in there, too, across the board, really across the  
6 whole commission, really aiming to get as many of those  
7 funds to California as possible, shaping the formula funds,  
8 getting those in, jumping through all the hoops to get  
9 those funds to come into the state, and then also competing  
10 in the competitive solicitations.

11 And, you know, we're increasingly, I think,  
12 getting our fair share of those funds as we tune our  
13 message and, you know, sort of facilitate conversations  
14 with DOE so they can see the value of working with us.

15 But NASEO, of course, does a great job  
16 coordinating across the states and sort of identifying  
17 areas of interest to groups of states and helping move the  
18 ball forward to help us achieve our particular state goals.  
19 And so a lot of collaboration with New York and some of the  
20 other states that can really move the needle, so  
21 Washington, Oregon, of course. So, anyway, just wanted to  
22 bring that back.

23 And that wraps me up. Thanks.

24 CHAIR HOCHSCHILD: Commissioner Gallardo?

25 COMMISSIONER GALLARDO: Thank you. I did have a

1 couple of items I want to talk about but I'm going to wait  
2 till the next business meeting.

3 CHAIR HOCHSCHILD: Okay. And same here.

4 So let's do item 20, if we could, Executive  
5 Director's Report.

6 EXECUTIVE DIRECTOR BOHAN: No report this  
7 afternoon. Thank you.

8 CHAIR HOCHSCHILD: Okay and item 21, Public  
9 Advisor's Report.

10 MS. BADIE: No report.

11 CHAIR HOCHSCHILD: And item 22, Chief Counsel's  
12 Report.

13 MS. DECARLO: Thank you. I propose that the  
14 Commission go into a closed session as specified in the  
15 agenda in item 22 b. iii. The agenda provides notice that  
16 the Commission may adjourn to closed session with its legal  
17 counsel and pursuant to Government Code Section 11126(e)(1)  
18 to discuss pending litigation. We propose to discuss in  
19 closed session the Nuclear Regulatory Commission's  
20 proceeding to consider PG&E's application to relicense  
21 Diablo Canyon Nuclear Power Plant Units 1 and 2. I  
22 anticipate it taking less than an hour.

23 CHAIR HOCHSCHILD: Okay, thank you.

24 We will adjourn to go to closed session and we'll  
25 return after that's concluded.

1           (Whereupon the Commission adjourned into closed  
2 session from 3:55 p.m., until 4:21 p.m.)

3           CHAIR HOCHSCHILD: We've come back, and nothing  
4 to report out from closed session. The meeting is  
5 adjourned.

6           (The meeting adjourned at 4:21 p.m.)  
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## CERTIFICATE OF REPORTER

I do hereby certify that the testimony in the foregoing hearing was taken at the time and place therein stated; that the testimony of said witnesses were reported by me, a certified electronic court reporter and a disinterested person, and was under my supervision thereafter transcribed into typewriting.

And I further certify that I am not of counsel or attorney for either or any of the parties to said hearing nor in any way interested in the outcome of the cause named in said caption.

IN WITNESS WHEREOF, I have hereunto set my hand this 7th day of March, 2024.



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MARTHA L. NELSON, CERT\*\*367

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I do hereby certify that the testimony in the foregoing hearing was taken at the time and place therein stated; that the testimony of said witnesses were transcribed by me, a certified transcriber and a disinterested person, and was under my supervision thereafter transcribed into typewriting.

And I further certify that I am not of counsel or attorney for either or any of the parties to said hearing nor in any way interested in the outcome of the cause named in said caption.

IN WITNESS WHEREOF, I have hereunto set my hand this 7th day of March, 2024.



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Myra Severtson  
Certified Transcriber  
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