DOCKETED	
Docket Number:	23-BUSMTG-01
Project Title:	Business Meeting Agendas, Transcripts, Minutes, and Public Comments
TN #:	249153
Document Title:	Transcript of the February 28, 2023 Business Meeting
Description:	N/A
Filer:	Liza Lopez
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	3/14/2023 4:25:20 PM
Docketed Date:	3/14/2023

BUSINESS MEETING

BEFORE THE

CALIFORNIA ENERGY COMMISSION

In the matter of,	)	
	)	
Business Meeting	)	23-BUSMTG-01
	)	

REMOTE VIA ZOOM

TUESDAY, FEBRUARY 28, 2023

10:00 A.M.

Reported By:
Peter Petty

APPEARANCES

CEC Commissioners

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Siva Gunda
Noemi Gallardo
Andrew McAllister
Patty Monahan

CEC Staff

Drew Bohan, Executive Director
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P R O C E E D I N G S

February 28, 2023 10:04 A.M.

CHAIR HOCHSCHILD: Well, good morning and welcome friends. I'm David Hochschild, Chair of the Energy Commission. Today is February 28th. I call this meeting to order. Joining me are Vice Chair Gunda, Commissioner McAllister, Commissioner Monahan, and Commissioner Gallardo. We have a quorum. We'll turn now to the Pledge of Allegiance, led by Commissioner McAllister.

(Whereupon the Pledge of Allegiance was recited)

CHAIR HOCHSCHILD: Thank you so much, Commissioner. We'll turn now to Item 1, public comment.

MS. BADIE: Good morning, and welcome. This is Mona Badie, the Energy Commission's Public Advisor. The Commission welcomes public comment at its business meetings. There will be multiple opportunities for public comment today. This initial public comment period is for any informational or non-voting items on the agenda. If you would like to comment on a voting item, we ask that you wait for the dedicated public comment period for that item to make your comment.

If you are on Zoom and wish to comment, click the raise-hand feature on your screen. Please make sure your hand remains raised until you are called on. And

if you are joining by phone, please press star-nine to raise your hand. To ensure we can hear from everyone and get through the agenda, comments are limited to two minutes or less per speaker and one speaker per entity. You will be called on when it is time for you to make your comment.

Okay, on the Zoom we have one person with their hands raised. There is just call-in user one. I'm going to unmute your line. Please unmute on your end, spell your name, state any affiliation and then we welcome your comment. Call-in user one, I'm opening your line.

MR. UHLER: Hello. Hello, Commissioners. This is Steve Uhler, U-H-L-E-R. I would like to comment on item four, but I haven't heard the presentation. So, I've seen the presentation, so I would ask that you check your Bagley-Keene for the third paragraph. You appeared to decide that I shouldn't know what the spoken part of the presentation is before I comment. So, I object to that.

And -- but without waiving that objection, I will try to comment on that. Looks like you have 47 sections of your public resource code that are affected by AB 205. Is it more than $50 million related to this action that will be-- come out of this? Will you be

having a rule making, and will it show up on your calendar for major rule regulations?

I would like to know-- I see some numbers in there. There was no backup material. I'd like to know about the equipment, the actual equipment, not just how many watts. And actually, I would rather know how many volt-amps are available, and power factor. If they're using that or if they're not using that. Hopefully they're using the EIA database, that's more comprehensive than anything that the Commission has.

So, I object to you continuing further. Item 5, my petition. I didn't petition for a hearing. I object to them-- to your staff placing a new order for you to vote on after the three-day period. You should have all of my comments. A lot of them are now rendered not directly to that item. There's no possible way. It's impossible for me to comment on that.

MS BADIE: Thank you Mr. Uhler—

MR. UHLER: I would ask you to table that.

MS. BADIE: Please wrap up, your time is up. And we will--

MR. UHLER: Okay, I'll wrap up.

MS. BADIE: -- have public comment.

MR. UHLER: Hang on.

MS. BADIE: We will have a public comment

period for Item 5.

MR. UHLER: Okay, I-- I'm objecting to the agenda containing that item. If the staff are free to put in anything after the three-day period that I-- limits me on written comments.

MS. BADIE: Thank you, Mr. Uhler--

MR. UHLER: Table it--

MS. BADIE: --your time—

MR. UHLER: Table that item.

MS. BADIE: I do not see any other raised hands. Back to you, Chair.

CHAIR HOCHSCHILD: Okay, thank you. We'll turn now to Item 2, agency announcements. I did want to begin by recognizing that February is Black History Month, and just want to acknowledge the extraordinary contributions African Americans have made both to the nation, the state, and to the Energy Commission and thank everyone who's been involved in any way with any of the events around Black History Month.

I also wanted to say a few words about the Tribal En Banc that's coming up this week. We are, together with all five Commissioners from the Public Utilities Commission and a number of staff, going to be doing the first ever Tribal En Banc meeting, engaging with 10 tribes in the North Coast over the next few days

on tribal consultations, tribal energy sovereignty, visiting a number of key sites up there. And this is the first time that we've done that.

I especially wanted to recognize our Tribal Advisor, Katrina Leni-Konig in the Public Advisor's office, and Mona, for all your incredible work to put that together. A lot of work. There has been almost a year of planning around this, and it's historic, and I think it really is time that we do this. So, I'm really excited for this week and just wanted to thank everyone who's been involved in putting that En Banc together.

At this time, I just opened up, if there's any other Commissioners who wanted to make any announcements, please speak up. Otherwise, hearing none, we'll turn now to consent calendar Item 3. Do we have any public comment on Item 3?

MS. BADIE: Thank you. Okay, so this is public comment period for Item 3. This is our consent calendar. If you'd like to make a comment, please use the raised-hand feature on Zoom. And if you're joining us by phone, please press star-nine to raise your hand.

And I am not seeing anyone with raised hands, so back to you, Chair.

CHAIR HOCHSCHILD: Okay. Unless there's Commissioner discussion, Commissioner McAllister I'd

welcome a motion from you on Item 3.

COMMISSIONER MCALLISTER: I move Item 3.

CHAIR HOCHSCHILD: Okay. Commissioner Gallardo, would you be willing to second?

COMMISSIONER GALLARDO: I Second.

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

COMMISSIONER MCALLISTER: Aye.

CHAIR HOCHSCHILD: Commissioner Gallardo?

COMMISSIONER GALLARDO: Aye.

CHAIR HOCHSCHILD: Vice Chair Gunda?

VICE CHAIR GUNDA: Aye.

CHAIR HOCHSCHILD: And Commissioner Monahan?

COMMISSIONER MONAHAN: Aye.

CHAIR HOCHSCHILD: And I vote aye as well. Item 3 passes unanimously. We will turn now to Item 4, Department of Water resources.

MR. QUINTERO: Thank you. Good morning, Chair, Vice Chair, and Commissioners. I am Jorge Quintero with the Department of Water Resources, serving as a principal engineer in the Electricity Supply and Strategic Reserve Office. This is our second quarterly update to the Commission regarding the current and planned investments with California's newly created (AUDIO CUT OUT) program. All my focus will be on DWR's

activities with respect to this program. There is considerable coordination with the California Energy Commission, the California Public Utilities Commission, and the California Independent System Operator. This is a team effort.

Next slide, please.

Thank you. DWR was tasked by the legislature in Assembly Bill 205 to establish a Strategic Reliability Reserve, and to provide quarterly updates at the state CEC business meetings, amongst other legislative reportings. Today's presentation is our second update. Our first was provided last year at the November 16th CEC business meeting. The next update will be provided in the second quarter of 2023 at the June CEC business meeting. In addition to this presented above, DWR recently submitted a separate progress report to the joint legislative budget committee detailing the status of commitments, disbursements, upcoming investments, and admissions occurring during the July through December 2022 reporting period.

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As stated in AB 205, the actions of this program are for the welfare and the benefit of the people of the state to protect public peace, health and

safety, and constitute an essential governmental purpose. California is leading the nation in electrification, but due to climate change induced extreme weather, emergencies, and supply chain constraints delaying new generation deployment, state government and other stakeholders are concerned about electrical grid reliability.

With these combined factors creating additional risks to the statewide power grid, this program is designed to support California's transition to a clean energy future, and establish reliability projects that are critical to help make sure the lights stay on. Projects under the program will result in a diverse set of backup electricity resources acting as an insurance policy and playing a critical role in safeguarding the state with enough resources to address extreme events.

Next slide, please.

DWR has been directed to significantly invest in secure and strategic energy reserves. DWR's investments include a combination of various projects and tasks that start with project selection all the way through to ensuring additional megawatts are available to the grid during peak emergency periods. DWR has been increasing its staff and contracting additional support

staff to assist with managing and reporting on the portfolio of reliability reserve projects. As previously mentioned, this is a team effort bringing multiple state entities together.

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Secure and additional power comes from a variety of sources. There are five distinct types of projects under the program. The first is the extension of operating life of existing generating facilities planned for retirement. The second is new and temporary power generators of five megawatts or more. If a generator is operated using diesel fuel, that department should operate after July 31st of this year, 2023.

The third is new energy storage systems of 20 megawatts or more that are capable of discharging for at least two hours. The fourth is generating facilities using clean zero emission fuel technology of any size to produce electricity. The fifth is to reimburse electrical corporations for the value of imported energy or import capacity products that were produced or procured above market cost or in excess of procurement authorizations and requirements. Part of our project solution criteria is driven by bringing available megawatts to the grid as quickly as possible, and prioritize investments that do not compete with

generating facilities already planned for development by the load serving entities.

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In 2022, the program had 200 megawatts of emergency and temporary power generation, and greater than 1400 megawatts of imports. For 2023, we are expecting 291 megawatts of emergency and temporary power generators using natural gas fired units with emission control. This year we are not planning to rely on any diesel units. Import energy and import capacity projects were only legislatively allowed for the summer of 2022 and are not included in future plans.

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For 2024, our future investments include projects covering extended operations of retiring facilities, and potential energy storage. Specifically, we're looking to extend operations of the one-through cooling steam units located in Southern California that are scheduled to retire at the end of 2023. This could retain up to 2,859 megawatts of hot capacity beginning in 2024.

In addition, we are looking at supplementing our emergency generators with non-emitting resources. However, this has been a challenge since non-emitting resources are also heavily sought after by the load

serving entities to meet their own resource adequacy obligations. The next slide captures an annual look at our program's investments over the upcoming years.

Next slide, please.

In 2022, the assets of the program's portfolio are totaled 1,618 megawatts. In 2023, the value drops down to 291 megawatts as there is no import program. In 2024, we see large contributions from extending the operating life of existing generating facilities resulting in a total of 3,150 megawatts.

I will make note that this graph does not include efforts related to Diablo Canyon power plant extension, which would kick in after the current operating license expire in 2024 and 2025, but potential extension of Diablo Canyon under Senate Bill 846 is administered at the state level by DWR, but is separate from the strategic reserve.

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That concludes DWR'S presentation. We are available for any questions. We also want to let you know that Pete Skala, director for Procurement, Efficiency, and Electrification on behalf of the California Public Commission, and Eliot Mainzer, the CalISO President, are also in attendance today to receive this update. Thank you. Our next update is

scheduled for the second quarter of 2023.

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And if desired, please follow us on social media via Facebook, Twitter, YouTube, and Instagram. Thank you.

CHAIR HOCHSCHILD: Thank you. That was terrific. Thanks for that presentation. We'll turn now to Commissioner discussion starting with Vice Chair Gunda.

VICE CHAIR GUNDA: Thank you, Chair, Jorge. Just thank you for that excellent presentation and walking us through it. I want to take a moment, I mean I've been following this carefully, DWR and the broader team as it pertains to the pertains to reliability.

Just want to commend DWR's incredible professionalism in 2022 and being able to streamline so many different processes to quickly ramp up the strategic reserve, and being very innovative, being very collaborative with all the agencies. So, to you, I know Behzad, as well as now Director Delphine Hou, everybody just big thank you to your team.

I think, you know, I'm tracking this pretty well, but I think it might be helpful for the Commissioners to-- for you to kind of share a couple things on why we are not investing in imports. I mean

what's the, you know, basically the limitations that you have on the way we spend money. And also just at a high level, the total amount that we have left over roughly, and how you're planning to make those investments. I think it might be helpful for all the Commissioners to just hear, 30,000-foot level, those details. Thank you.

MR. QUINTERO: Sure. So, from a program perspective, right now we legislatively not authorized to do imports in 2023. There's nothing that permits us to do so, but if that were to come about, obviously we'd take a look at it. It's not something that we're planning to until that's given that as an authority to us. I think that's the first question you posed.

In terms of limitations, I think the biggest one that we've come across, and I think I mentioned it towards the portion we're talking about future. When we start looking at cleaner resources, we face the challenge of trying to not compete with resource adequacy and causing an impact there in our footprint.

So being able to get not only resources that are clean, but also minimize our impact to resources that could be assisted in the resource advocacy market, and also from the time-- perspective of, you know, being able to get it in time. A lot of these resources have very long lead times, so unfortunately we haven't been

able to secure anything in this year, but we are looking in 2024 and forward to be able to bring things in to be able to create the transition for California to clean energy.

VICE CHAIR GUNDA: Thank you, Jorge. Just on the total allocation of the budget, and you know, where we are, I think it might be good for, you know, both the public as well as the Commissioners to just hear.

MR. QUINTERO: At the moment, the majority of our budget has been committed. We will need to be looking to see where we can maybe streamline some portions and maybe move things around. But given the high cost of what the price of everything is right now in the market, and product, and install and all that, the majority of the budget has been expended.

VICE CHAIR GUNDA: Thank you. Great. Chair, back to you.

CHAIR HOCHSCHILD: Okay, let's-- any other Commissioner questions or comments? Okay. Well, thank you, Jorge, for the presentation. Really helpful, and look forward to hearing from you again. We will turn now to Item 5, petition to request a rulemaking hearing. I welcome Linda Barrera to present.

MS. BARRERA: Good morning, Chair and Commissioners. Just want to double check my sound.

Sounds--

CHAIR HOCHSCHILD: You're fine. Yep.

MS. BARRERA: Okay, great. Thank you. So good morning. I'm Linda Barrera, Chief Counsel of the Energy Commission. This Item 5 is a proposed order for the Energy Commission's consideration in potential adoption. The proposed order would deny a Petition for Rulemaking filed by a member of public, Steve Uhler, that he filed on January 29th, 2023.

The Petition for Rulemaking seeks to amend Section 1104 Subsection E of Title 20 of the California Code of Regulations. In addition to the proposed order, the backup materials for this item include a memorandum supporting the proposed denial.

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Government Code Section 11340.6 provides that any interested person, including a member of the public, may petition to amend the Energy Commission's regulations. The CEC has established procedures in the California Code of Regulations Title 20, Section 1221, that set the requirements for filing a Petition for Rulemaking within the Energy Commission. On January 29th, 2023, Steve Uhler filed a petition to amend.

After a petition is filed, the Executive Director of the Commission reviews whether the petition

is complete. On February 14th, 2023, the Executive Director, Drew Bohan, has certified that the petition was complete and determined it met the requirements for consideration by the Commission.

If the Executive Director certifies the petition as complete the Commission has 30 days from the filing of the petition to grant or deny the petition, including a written statement for the reasons of any denial. So, the next step is for the Energy Commission to do that; to either determine whether to grant or deny the petition.

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In his petition, Mr. Uhler requests that the energy-- as I said before, amend the section of the code, Section 1104(e), which states that public comment-- in that section it says, "Any person may file comments in writing on any agenda item. Unless otherwise directed by the presiding member, all written comments shall be filed at least three days before the Commission meeting. Any person present shall be given an opportunity to make oral comments on any agenda item. Provided, however, that the presiding member may limit or for group such comments as necessary for the orderly conduct of the business."

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So, his petition requests that the Commission amend the section of the code in two ways. First, that the Energy Commission add language that requires that all documents submitted by staff for business meetings be filed in the docket at the same time that the Notice of the business meeting is posted, which is-- typically it's 10 days before the business meeting. And the petition claims this is necessary to make it possible for the public to write written comments in a timely manner.

Second, the petition also requests that the Energy Commission amend the Section of Title 20 to require the Commission to provide an opportunity for members of the public to comment on every agenda item before or during the Energy Commission's discussion or consideration of an item. The petition states that over the last year, the public was not allowed to speak on the same agenda-- on some agenda items before or during the state's body's discussion or consideration of the item.

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So, as further explained the memorandum file as a docket material to this item, the proposed order recommends denying the petition because no amendment is necessary at this time. The Commission already follows

the legal requirements when Noticing this is meeting agendas and making materials available to the public. Consistent with the requirements of the Bagley-Keene Open Meeting Act, the Commission has always provided notice of its business meeting at least 10 days before the meeting, and the Notice of the meetings include a specific agenda containing a legally sufficient description of the items to be discussed and considered during the meeting.

Based on the agenda, members of the public know what the agenda items concern, and have an opportunity to file timely written comments and/or appear and provide comment orally in-person and virtually during the business meeting. The law does not require the Energy Commission to file all supporting documents at the same time as the Notice of the meeting, consistent with Bagley Keene Open Meeting Act. Prior to or during the business meeting, the Energy Commission consistently makes available to the public all public records distributed to Energy Commission Commissioners pertaining to any item to be considered during the meeting.

In instances when specific laws require that the Energy Commission provide additional notice, such as in rulemaking proceedings, the Energy Commission

provides that notice. For example, the Commission files Notices of Proposed Action, Initial Statement of Reasons, and other relevant documents in corresponding rulemaking proceeding dockets for at least 45-day comment period before the CEC, the Energy Commission, adopts the rule make at a business meeting.

The Energy Commission also posts backup materials to the business meeting website so that people that are not following a specific docket will be aware of the items being considered at the business meeting to inform the public of any documents that will be considered by the Commissioners. After the Energy Commission adopts the resolutions or orders, they are filed to the business meeting docket and the specific rulemaking dockets to complete the rulemaking record, pursuant to a regulation, specifically Title 20, Section 1208.

Finally, after considering the petition, the Chair, on the advice of the Chief Counsel's Office, has and will continue to provide an opportunity for public comments on all informational items, the one-- voting items, before they CEC hears or discusses these items. So, there's no need to amend the regulations to do this. Finally--

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We carefully reviewed the petition and the Chief Counsel's office has determined that the Energy Commission practices are consistent with the law. The rulemaking requested by the petition is not necessary, and does not warrant the expenditure of resources that such a rulemaking would require. Thus, Commissioners and Chair, I recommend that the Commission adopt the proposed order filed in the docket materials for this item and thereby deny the petition. I am happy to answer any questions to you're having.

CHAIR HOCHSCHILD: Thank you so much, Linda. Let's go to public comment on Item 5.

MS. BADIE: Thank you. This is Mona Batty, the Public Advisor. The Commission now welcomes public comment on Item 5. If you are on Zoom, click the raise-hand feature on your screen to notify us you would like to make a comment. And if you are joining by phone please press star-nine to raise your hand. Comments are limited to two minutes or less per speaker, and one speaker per entity. Please wait for me to call on you to make your comment.

Okay, we have one-- call-in user one has raised their hand. I will open your line. Please unmute on your end, state and spell your name, any affiliation, and we will welcome your comment.

MR. UHLER: Hello Commissioners, this is Steve Uhler. I am the petitioner. I request ample time to defend my petition. I would like to note the Commission is responsible for very technical items to keep the energy system functioning. The agenda-- it is not possible to put the information on the agenda for the public to comment.

I would also like to note that your Section 20 CCR 1104 is a Bagley-Keene rule. It's authorized by Bagley-Keene. It overrides Bagley-Keene. It supersedes Bagley-Keene. You currently offer the public-- allow the public to speak on every item, any item it says; any item. So, your chief counsel is not given it to you straight. You should ask the Bar, or you should ask the Attorney General about when you include something, you exclude everything else.

If the legislature wanted you to do actually what you're doing today, you actually need a rulemaking if you want to continue to use this as your method. You can do it once in a while, but once it becomes a standard, you need to adopt a regulation saying you have-- you can't speak on these information items. That has to actually be in the regulation.

You can't embellish the regulation the way that the Chief Counsel is doing. No possible way.

Absolutely. We're talking just application of meeting laws here, maximum jurisprudence.

It's impossible to comment on what they added after the three-day-- three days before the meeting. I cannot write a comment. You should have all of those comments in front of you. You should have the docket in front of you. You should have your copy of the Bagley-Keene, which is required by the Bagley-Keene to be given to you.

MS. RAITT: Thank you for your comment. I do not see any other raised hands. Back to you, Chair.

CHAIR HOCHSCHILD: Thank you. And thank you, Linda, for that overview and recommendation. Let's go to commissioner discussion starting with Commissioner Gallardo.

COMMISSIONER GALLARDO: Buenos dias, good morning. Thank you, Chair. Linda, I wanted to go to you first. Did you want to respond to anything Mr. Uhler said? Or, would you like me to continue my comments?

MS. BARRERA: Yes, I have two comments in response. Mr. Uhler, thank you so much for being so vigilant in ensuring that the Commission follows all laws and regulations to ensure that we both give members of the public adequate time to review documents and

comment. Just want to let you know, and for the public's benefit as well, I want it-- it's my duty and responsibility to run the Secretariat Office, which organizes the business meeting along with the Public Advisor's Office. So, I do take your comments very seriously and immediately when you comment, I try to figure out if there's anything that we can improve upon.

So, I went and looked at just, by way of examples, the business meeting, this current business meeting agenda, and looked at all the items that are before the Commission right after this item, Item 5. And I was able to confirm that, as we always do, we give the public adequate time to comment.

Just by way of example, agenda Item 6, right after this item. It's the final 2022 Integrated Energy Policy Report. The Docket is 22-IEPR-101. The draft report was published on February 2nd, 2023. CEC staff published a Notice of Report Availability and Request for Comments. That is 26 days before the business meeting.

Another example is agenda Item 7, the Preliminary Assessment of Economic Benefits of Offshore Wind. That report was published on December 29th, 2022, the draft report, with a Notice of Availability for the public to comment. That also was published in as-- and

filed in the docket for offshore wind. And a notification was sent to everyone who has signed up for email notification regarding offshore wind.

Two more examples, the last two remaining items on the agenda. Item 8, Clean Energy Reliability Investment Plan Report. The staff published the Notice of Report Availability and Request for Comments on the draft report in the corresponding docket on February 9th, 2020-- February 9th, 2023, and sent to everyone who was signed up for email modification on reliability matters.

Last, agenda Item 9, Diablo Canyon Power Plant exemption. That Notice of Availability of that report and Request for Comment was published in the corresponding docket on February 14th, 2023. It was sent to everyone who has signed up for email notification on the reliability report.

So that is-- those four examples just show Commissioners and Chair that the CEC staff were diligent to notify the public in a timely matter of technical reports, policy reports, and other matters before the CEC. These examples show how this CEC strives to provide the public adequate time to review and submit writing co-- and submit written comments.

And I just wanted to give you those examples,

Mr. Uhler and members of the public, of specific agenda items that were before the Commissioners for a vote where we provided not only 10 days to provide comment, but additional timing in some cases like the offshore wind report before the Commissioners today; the initial draft was published on December 29th. So, we have been providing the public sufficient time to review very technical meeting reports.

COMMISSIONER GALLARDO: Thank you, Chief Counsel Barrera, I really appreciate you explaining that and being so thorough. I also wanted to thank Mr. Uhler for his participation in an array of our proceedings, including our business meetings. I think it is part of the duty on behalf of the public to hold us accountable and to also give us recommendations on how we can do even better.

So, we take all of those comments very seriously and I wanted to recognize that our chief Counsel, Linda Barrera, and her team, all of the Chief Counsel's office and the Public Advisor's office as well review all of the comments that come through for business meetings and other proceedings. They're taken very seriously. So, I also want to appreciate that diligence. I agree with Chief Council Barrera on that and how all of our staff takes it very seriously.

So, I agree that we're meeting our legal requirements here, and I think we even strive to do more and better than what our legal requirements are, but we are meeting that minimum for sure. So, I'll keep it short on this end, that I don't think the amendment-- I agree that the amendment is unnecessary and that we should adopt the order in the back of materials. So, thank you again Chief Counsel Barrera for a thorough presentation and walking us through that.

CHAIR HOCHSCHILD: Thank you, Commissioner. Any other Commissioner comments? If not, I just really wanted to reiterate Commissioner Gallardo's comments. I'm satisfied with the public process. We have, I think, bent over backwards to take public comment and engage in addition to that with, you know, Commissioner meetings, with stakeholders on all sorts of issues.

And I think the current structure makes sense where we do public comment specifically for items where we're taking an action, but on items where we're not taking an action, that public comment, which everyone is welcome to contribute, but it happens at the beginning of the meeting. I think it's appropriate. So, I'm satisfied with that. And I, again, Linda, just really wanted to thank you for your diligence and thoroughness in looking into this.

And I think we should always be open-minded towards any suggestions or petitions about ways we can improve our process. I want to be clear about that, and giving it a fresh look. But not every petition will result in a change, but I think we should always be open-minded, and you have been. So, I just want to thank you for that. And with that, I'd welcome a motion on this item from Commissioner Gallardo

COMMISSIONER GALLARDO: I move to approve Item 5.

CHAIR HOCHSCHILD: Vice Chair Gunda, are you willing to second?

VICE CHAIR GUNDA: Second, Item 5.

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

COMMISSIONER GALLARDO: Aye.

CHAIR HOCHSCHILD: Vice Chair Gunda?

VICE CHAIR GUNDA: Aye.

CHAIR HOCHSCHILD: Commissioner McAllister?

COMMISSIONER MCALLISTER: Aye.

CHAIR HOCHSCHILD: Commissioner Monahan?

COMMISSIONER MONAHAN: Aye.

CHAIR HOCHSCHILD: And I vote Aye as well. Item 5 passes unanimously. We'll turn now to Item 6, the Integrated Energy Policy Report Update.

MS. RAITT: All right, thank you. Good morning, Commissioners. Staff is requesting your approval of the 2022 Integrated Energy Policy Report, update or the 2022 IEPR update for short. I'm Heather Raitt, the director for the report. I'm joined by lead authors and others who will be presenting on topics they contributed to. Mona Badie, Hilary Poore, Heidi Javanbakht, David Erne, Amanda Bourdet, and Jane Berner.

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So, I'll just go over a little background on the report before we get into the content. The statute requires the Energy Commission to assess energy trends and issues facing the state's electricity, natural gas, and transportation fuel sectors with updates on even numbered years, as for the report being considered for adoption today. The report develops policies to advance clean, reliable, and affordable energy system with benefits that reach all Californians.

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Under Vice Chair Gunda's leadership, the report focuses on embedding equity and environmental justice in the CEC's work. It also puts forward plans for an easily navigable online data platform called the California Energy Planning Library, and an update to the California Energy Demand Forecast. Further, it

addresses emerging topics including energy reliability, western electricity integration, hydrogen, gasoline prices, fossil-gas transition, and distributed energy resources.

The 2022 IEPR update reflects input and analysis from a broad array of people and organizations engaged in the process. The CEC sought input from industry experts, the public, and sister agencies throughout the report development process. We greatly appreciate their participation. We held 11 workshops, one hearing, and one webinar. Again, I'd like to thank the workshop participants, both the panelists and the public, for their time and contributions to this report.

The public had opportunities to comment on each workshop and on the draft report that were made available in November, and on the final report that we posted earlier this month. The final report reflects changes made in response to public comments, and market updates and forecast results that were not available in November. Also, an erratum reflected a few further updates and edits and response to comments on the final report was posted yesterday. Commissioners, a copy of the erratum was included in your meeting materials.

And finally, as shown on this slide, the media team developed a companion document that highlights--

that does a great job of highlighting and condensing the content of the report into a very brief format.

So, with that background, we'll now provide a high level summary of the key findings starting with Mona Badie. Go ahead Mona.

Next slide, please.

MS. BADIE: Good morning. I'm Mona Badie, the Energy Commission's Public Advisor. I'll be presenting on the embedding equity and environmental justice portion of the 2022 IEPR, led and drafted by our very own Commissioner Gallardo and the IEPR team. In 2022, the IEPR included a focus on equity and environmental justice for the first time.

Next slide.

Hybrid regional workshops and other engagement events were conducted in the Inland Empire Salton Sea region, the San Joaquin Valley, and the Central Coast, and covered a wide range of equity and environmental justice topics, including the historical context of inequitable government policies and their connection to current pollution burdens and climate vulnerability, addressing barriers to community engagement, economic workforce needs, and the diverse needs and capacities of California's communities where more targeted customized resources are needed.

Next slide.

During the IEPR update, the CEC explored revisiting the energy equity indicators first developed in 2018. When originally developed, the goals for the indicators were to identify opportunities to improve access to clean energy technologies, increase clean energy investments, and improve resiliency in low-income and disadvantaged communities. Comments received during the IEPR process supported updating the indicators, and stressed the importance of available, accessible, and understandable data information. The iterative process identified to update the indicators consists of scoping and research, framework metrics and indicators, ground truthing, and then publication.

Next slide.

The 2022 IEPR update includes CEC's first ever justice, access, equity, diversity, and inclusion framework in Appendix A, outlining CEC's commitment to embedding energy equity and environmental justice into its programs, policies, and projects. The framework envisions an energy system for all Californians, and includes definitions for terms such as energy equity, and description as a priority beneficiary such as justice communities and California Native American tribes.

It also lays out guiding principles, best practices, and considerations for implementation, including engaging with justice communities and tribes early, often, and meaningfully; identifying and removing barriers to participation in CEC programs and proceedings; including technical assistance and customized resources were possible; and implementing metrics for program and policy evaluation to ensure accountability.

Next slide.

Several recommendations were included in the 2022 IEPR for embedding equity and environmental justice. The first is to open an informational proceeding on equity and environmental justice to continue the formal dialogue. Also, a recommendation to track CEC progress through future IEPR proceedings and analysis.

Another recommendation is to hold equity and environmental justice summits paired with regional engagement and site visits. Also, provide more customized support to tribes and communities to accelerate their participation in the clean energy transition, including funding for technical assistance, engagement compensation, and local government partnerships.

There's also a recommendation to establish one or more dedicated workforce development positions at the Commission. And, to use a regional approach to engagement in coordination with other agencies, including local governments. And finally, there was a recommendation also to expand the supplier diversity efforts so that we can reach more small and diverse-owned business enterprises.

That concludes my presentation. Hilary Poore will present next. Thank you.

MS. POORE: Thank you, Mona. Hello, Commissioners. My name is Hilary Poore, and I'm the supervisor of the Data Collection and Analysis unit in the Energy Assessments Division. As a part of the 2022 IEPR update, Kristen Widdifield and I developed the California Energy Planning Library, a new section of the CEC's website that aims to house our data and data products in a more user-friendly way, helping further CEC's commitment to provide stakeholders with transparent data and analytical tools that are readily accessible and easy to navigate.

Next slide, please.

The CEC serves an important role as the state's energy data repository, and the data and analytical products developed by the CEC are key inputs

to inform the state energy planning operations and policy. Prior to the California Energy Planning Library, data and information was organized on the CEC's website in a way that made it difficult for users to navigate.

Recognizing that data availability is key to an equitable transition and to bringing clean, reliable and affordable energy to all Californians, the California Energy Planning Library was conceived. It aims to make data and analytical products easier to find, helps identify opportunities to modernize the presentation of data, links to widely used reports and data, and showcases important analytical products adopted by the CEC.

Through an IEPR workshop, we garnered invaluable feedback from stakeholders on the existing barriers to accessing, understanding, and being able to use available data. These insights and extensive engagement with CEC's subject matter experts informed the development of the site map, or the California Energy Planning library's organized organizational structure, which is featured on this slide. By focusing on external novice users and optimizing user experience, the California Energy Planning Library makes CEC's data and data products more accessible, available, and

understandable.

Next slide, please.

Data and information are foundational to building the policies and tools necessary to equitably achieve carbon neutrality by 2045. With the California Energy Planning Library, the CEC is striving to make its data and analytics more easily available to all; from pure agencies engaged in energy planning to novices who want to learn more. The upcoming launch of the California Energy Planning Library represents a milestone for the CEC in its effort to ensure that key data and analysis developed by the CEC are timely, transparent, and readily accessible.

Development of the California Energy Planning Library will be an iterative process and should be revisited on an annual basis. For future updates. The CEC should engage stakeholders and solicit feedback on how to continue to improve the new platform, ultimately leading to improvements in the types and granularity of the data we share.

Finally, we recommend the state provide adequate and consistent funding to support further development and ongoing data updates for the California Energy Planning Library. Thank you Commissioners and I will turn it over to Heidi.

MS. JAVANBAKHT: Good morning. I'm Heidi Javanbakht, the manager of our Demand Analysis Branch in the Energy Assessments division, and I'll be giving an overview of the California Energy Demand Forecast update.

Next slide.

Demand forecasting is one of the Energy Commission's charter responsibilities. It is a critical planning tool that lays the foundation for a number of energy planning and procurement efforts, including transmission and distribution planning, integrated resource planning, resource adequacy, and other activities aimed at keeping California's energy clean, affordable, and reliable.

Next slide.

We forecast annual end-user electricity consumption, along with peak and hourly electricity demand. The forecast includes projected impacts of self-generation, electric vehicles, and other load modifiers. For 2022, we produced a baseline scenario along with a set of additional achievable scenarios.

2022 was an update cycle. Often in an update year, we limit the scope of our analysis to consider only the additional historical data available, as well as refreshed economic, demographic, and rate

projections. This cycle, however, our update was a little more ambitious. We revised our additional achievable fuel substitution analysis to include for select scenarios, the potential impacts of the Air Resource Board's State Implementation Plan Zero Emission Space and Water Heating Measure.

We also developed a new scenario framework for assessing potential policy and programmatic impacts around transportation electrification, and we call these scenarios additional achievable transportation electrification. They reflect the impacts from the Air Resource Board's Advanced Clean Cars II, and Advanced Clean Fleet regulations.

We introduced a new general forecast scenario framework recognizing that the greatest drivers of uncertainty in the demand forecast revolve around the state's decarbonization strategies. We have opted to focus the bulk of our analytic efforts on developing scenarios around those strategies, rather than develop economic and demographic scenarios like we've done in the past. So, while previous forecast vintages included a high, mid, and low baseline scenario, the 2022 update includes only one baseline scenario and then an expanded set of additional achievable scenarios.

And lastly, there is an agreement between

leadership at the Energy Commission, the Public Utilities Commission, and the California Independent System Operator, the ISO, referred to as the Single Forecast Set Agreement, outlining the commitments at each organization to use a particular combination of forecast products for particular planning purposes. And for the sake of transparency, that agreement has been updated and memorialized within the forecast chapter of the 2022 IEPR update.

Next slide.

This plot shows the managed peak demand for the ISO region for each year of the forecasts for the planning forecast and the local reliability scenario. The dashed blue line shows the 2021 forecast as a reference. The main difference between the 2021 forecast and the 2022 planning forecast is the inclusion of CARB's Advanced Clean Cars II and Advanced Clean Fleets regulations. These add nearly 2,700 megawatts to the peak in 2035 compared to 2021.

The planning forecast annual growth rate is 1.3 percent. The local reliability scenario adds 4,000 megawatts to the 2035 peak load, and this added peak load comes from incorporation of more aggressive building electrification assumptions based on the space and water heater regulation proposed in the CARB's State

Implementation Plan.

These are of course high-level results. Final detailed results have been docketed and posted to the IEPR website, and the forecast was adopted at the January 25th business meeting. That concludes my presentation, and I will hand it to David Erne

MR. ERNE: Good morning, Commissioners. I'm going to be covering four of the topics that we included in our emerging items: reliability, western integration, fossil gas, and distributed energy resources. So first I'll start with reliability.

Next slide.

For this year, this is a follow on from a much more extensive volume that we produced in 2021. So, this is kind of a recap of reliability situation this year based on the analysis we've conducted since 2020 about the situation for reliability in the state of California. And what we covered in this particular update was really honing in on three particular challenges that we see affecting California's reliability situation.

First is the need to improve planning, and that revolves mostly around the effects that climate change has on weather variability, and ensuring that we're building our both demand and supply forecasting to

account for that variability in weather as we move forward for our planning, for our procurement, et cetera. We are working to improve both of those and have done some work on those over the last few years, but it's an area that we need to continue working on.

It also affects more than just those modeling. There's other planning activities that the state needs to consider. We need greater amounts of transmission, so greater planning around the transmission necessary for the build out of new resources. And as was mentioned by Mona in the equity portion of the discussion, the need to engage more with communities to understand, on the demand side in particular, those needs that they have so that we can address those in our planning processes and build out our programs to better address the affordability and justice community needs for the state.

We also identify that we need a greater number, or greater diversity, of resources in the state. As we have mentioned in the past, supply chain particularly for solar and storage, is causing challenges for those resources to be relied upon for sourcing as much as we would like them to be. So having a greater diversity of resources will help that. We also recognize that having more resources on the demand

side close to the load is very important, and I'll talk a little bit more about that in a couple items later today.

And lastly, because of that weather variability, we're going to have more extreme events, and those extreme events we're going to have to have resources in order to keep the grid reliable during those events. Like the strategic reliability reserve that was mentioned earlier by Jorge, which is bringing resources on during those times where we have those extreme events to ensure that we have grid reliability.

We also covered some particular areas that were important last year relative to the heat wave that we had from August 31st to September 9th. Particularly, we covered the events that happened on September 6th, where we had the greatest load in CalISO territory on record, which was about 52,000 megawatts. We were on track for about 53,000, but customer voluntary efforts and other activities helped bring us down from that even greater peak.

The result of riding through that event without any outages was in part due to strong statewide collaboration. And that was not just among the energy agencies, but with all the balancing authorities, the utilities, and as I mentioned, individual customers who

supported grid-- load reduction during those high times. And as I mentioned, the strategic reliability reserve, which was only established in the summer of last year and was ramped up by DWR and CEC to be able to support that event and be able to bring resources on to keep the grid operational.

Next slide.

Another topic that we covered was Western electricity integration. This was pretty much a situational awareness overview for the emerging topics to talk about and get a baseline of what's happening in the west relative to integration. We covered three main topics as part of that portion of the IEPR, and as part of a major workshop in December. We looked at markets, we looked at resource adequacy, and we looked at transmission as three critical elements of coordination.

For the markets, we covered two different areas that are being built out in the west to help expand and bring more of the renewable resources that are being built to the load centers. And that's through CAISO's extended Day Ahead Market and the Southwest Power Pool Markets Plus program. We talk about both of those programs in the IEPR.

F0or the EDAM that actually is complete. CalISO voted that through their Board of Director--

Board of Governors and the WEIM governing body in February earlier this month. And Pacific Corp has already identified that they're going to be joining EDAM. So, we're already having expansion of that market and growing that market. It'll bring more resources to bear.

Southwest Power Pool is in development. It is expected to be focusing on the east side of the Western Interconnect but could be gaining some traction within the west side of the interconnect. Bonneville Power Administration is putting funding towards the development of Market Plus but has not basically committed to being part of the Markets plus program.

The value of Markets Plus that was-- or the Markets, excuse me, overall, that was brought to bear in those conversations is that real-time markets have already brought a savings of 3 billion since 2014. And these day ahead markets have even greater savings to bring more than 500 million to 1.2 billion annually when these programs are in place and running.

Next, we talk about resource adequacy. The major themes here for resource adequacy are that it is a challenge throughout the west. We've identified in the IEPR in the past couple years the tightness for California entities in the RA market, but it is

happening across the west. The policies that are similar to California's that are expanding around the west are causing greater demand for a limited number of clean energy resources. And so those RA conditions are tight.

And all areas in the west are working on planning for extreme events. It's not just California, but having those resources available to address extreme events such as the extreme heat, wildfire impacting transmission like we saw in 2021. Those are something that is on the minds of all Western states to be able to focus on.

And lastly, we talked about transmission and the need for more transmission. Transmission has long lead times, and so it's important to get the planning done and critically invest in those resources now to have them available for all these new resources to be interconnected as quickly as possible.

Next slide.

We also give an overview of the fossil-gas transition. This again was a follow on to a large volume that we had in last year's IEPR, in the 2021 IEPR. But again, it's an ongoing concern for the state. About 31 percent of our total energy consumption is still fossil gas. We have a long way to go to

decarbonize that use.

We have challenges that we need to deal with, which we over-- which gave an overview in the IEPR chapter. Reducing emissions is very critical, and how we can do that through alternative resources like decarbonization or other alternative fuels is important for us to address and build into our system.

Also, as we're thinking about this transition, maintaining safety and reliability is important. We need to ensure that we are still investing wisely to maintain the system that's in place to make sure that it's safe and reliable, without over-committing resources or over-building for a system that we may be utilizing less or in different ways.

And lastly, minimizing rate impacts. We've all seen gas prices go up recently, and making sure that we're working and keeping our eyes on those prices and ways that we can help minimize those rate impacts to customers.

Lastly, we give an overview of the major activities that are going on among CEC, CPUC, and CARB. We have a cross coordination effort among those proceedings and activities. We gave an overview of CEC's gas decarbonization proceeding, which we started last year. CPUC has multiple proceedings going on,

including on Aliso Canyon, on decarbonization and renewable gas. And of course, CARB published their scoping plan in December of 2022, which lays out actions that can be taken by the state to meet its climate goals.

Next slide.

We also cover distributed energy resources. Noting that distributed energy resources are growing in the state, but they're not growing fast enough. We need greater investment in distributed resources to ensure that we can take advantage of solutions that are close to the load, help minimize our need for additional transmission, to provide direct customer benefit as well as grid reliability benefit through their development.

We have challenges associated with that. We need to expand that value proposition, again, to demonstrate that we can have both grid impact and we can have customer impact. Finding that optimal balance between DER and grid assets, and also speed the interconnection. We need to get interconnection happening more rapidly so we can get these resources online very quickly, but also safely.

And we also gave an overview of both the CEC and the CPUC proceedings that are going on. CEC opened an informational proceeding on DER. We're going to be

looking at the challenges identified, and CPUC is doing similar with their high DER OIR. And we're coordinating among those two proceedings to try to answer those challenging questions.

With that, that concludes my overview of the sessions and I'll turn over to Amanda Bourdet.

MS. BOURDET: Hello, Commissioners. My name is Amanda Bourdet. I'm the manager for the Data Integration Branch and the Energy Assessments Division. In the emerging topics chapter, weighing cost factors and price spikes to delve into the reasons behind the recent record high gasoline prices in California, and what we are doing to plan for the transition away from petroleum fuels.

Next slide, please.

We started with providing an overview of the historical price premium for gasoline in California. The high gasoline prices are largely attributable to unplanned refinery outages, higher refinery cost and profit margins, higher production costs, higher dependence on foreign and Alaskan crude oil sources, fees for environmental programs, higher gasoline taxes, and higher distribution costs and retail margins. The consistently higher gasoline prices in California increased costs for consumers and businesses, and

particularly burden low-income consumers.

Next slide, please.

Next, we examine the price spikes in 2022 that resulted in some of the highest gasoline prices in California's history. In March 2022, global crude oil prices spiked resulting in gasoline price spikes throughout the United States with an even higher spike for Californians. In October 2022, there was a combination of unplanned refinery outages and lower than normal inventory and tight supply, resulting in California's gasoline prices diverging from US prices by a record $2.61 per gallon, nearly a dollar per gallon higher than the previous record set in March. During this time, oil refineries realized exceedingly high profits.

Next slide, please.

So given these trends in high gasoline prices, a number of activities are occurring to look at ways California can mitigate gasoline price spikes, ensure a reliable supply of gasoline, and plan for the transition away from petroleum fuels. In December 2022, a special session was called by the governor to introduce proposed legislation to protect consumers from fuel price gouging, and shed greater transparency on refinery maintenance schedules, supply contracts and inventory.

Additional data about refinery operations is necessary to better understand the impact of planned and unplanned refinery outages, and inventory levels on gasoline prices. With price volatility issues becoming more problematic in future years, a more detailed understanding is necessary to ensure that Californians are not overly burdened. The CEC is developing a transportation fuels transition study to plan for and track progress on the state's transition away from petroleum fuels and toward a reliable, safe, equitable, and affordable transportation fuels future.

Thank you, Commissioners. That concludes my presentation and I'll turn it over now to Jane Berner.

Next slide.

MS. Berner: Good Morning. Jane Berner, from the Fuels and Transportation Division. I will briefly summarize the section of the 2022 IEPR update that focuses on the role of hydrogen in California's clean energy future.

Next slide, please.

This section of the IEPR discusses potential uses of low carbon hydrogen to reduce greenhouse gas emissions. This figure shows many of these potential uses, including hard to electrify industrial processes, and hard to electrify transportation such as trucking,

rail and marine applications, and aviation. Low carbon hydrogen may also play an important role in grid reliability with potential uses in seasonal energy storage and power generation. And, it offers opportunities to develop new business in California such as in green ammonia production.

For hydrogen to play any of these roles, the supply of hydrogen must increase substantially and be low-carbon. Today, almost all hydrogen is made from fossil fuels and production must evolve to low-carbon processes. In the recently adopted Scoping Plan Update, the California Air Resources Board estimates that the supply of low-carbon hydrogen will need to increase 1700 times over current levels if California is to reach its greenhouse gas emission reduction targets under the scenario envisioned by the plan.

Next slide, please.

The IEPR makes several recommendations for actions the state can take to make sure this potential growth in hydrogen production and use is done responsibly. First off, is to support a standardized method of measuring the climate benefits of hydrogen that is transparent, accounts for full lifecycle emissions, and allows for comparison between varying feed stocks and production processes.

Second, is to support target setting for reducing greenhouse gas emissions from hydrogen production. Just like the state has set a timeline for making the electrical grid renewable, so could a timeline be set for hydrogen.

Also important is conducting analysis of hydrogen supply to ensure that it is adequate to support decarbonization where needed. An analysis is also needed to ensure that there is sufficient electricity to support low-carbon hydrogen production using electrolysis, which is a low carbon way of making hydrogen from electricity and water.

Finally, the Federal Hydrogen Hub Initiative is a unique opportunity to jumpstart this envisioned low-carbon hydrogen ecosystem in California. The CEC must continue to work with the Alliance for Renewable Clean Hydrogen Energy Systems, or ARCHES, to ensure that California secures a federal hydrogen hub.

That concludes my slides, and I will now hand it off to Heather, right to close at this presentation.

MS. RAITT: Thank you, Jane. Next slide, please.

So before concluding, I'd just like to take a moment to thank you, Vice Chair. for your guidance and leadership throughout this year. And also, to thank

your staff, Ben Finkelor, Liz Gill, Erik Lyon, and Miina Holloway for their support. And to, I'd like to thank Chair Hochschild, Commissioner Monahan, and Commissioner McAllister for your insights and guidance. And to thank Commissioner Gallardo for leading us on developing the equity and environmental justice focus for this report.

And clearly this is a big report. It is a huge team effort and includes many folks beyond those who presented today made. So, we had contributions from staff from the energy assessment division, the research and development division, the siting division, as well as the dockets team, web team, PAO, plus legal office, IT and media. And I'm very grateful to everybody who contributed. We're so fortunate to have so many dedicated staff working on this.

And finally, I'd like to thank Harrison Reynolds who helped with some of our workshops, and especially to thank the core IEPR team, Stephanie Bailey, Raquel Kravitz, and Denise Costa, who work with us -- work on this every day, and they make things happen from behind the scenes.

So that concludes our presentation. And in addition to the staff presenting today, Lisa DeCarlo from the Chief Counsel's office is available to address any questions you may have. Again, staff requests that

you adopt the 2022 IEPR update, incorporating changes detailed in the erratum. Thank you.

CHAIR HOCHSCHILD: Well, thank you so much Heather once again, for all your professionalism and hard work and everyone on the team. We'll go to public comment before Commissioner discussion. So, Mona, do we have public comment on Item 6?

MS. BADIE: Hello. Thank you. This is Mona Badie, the Public Advisor. The Commission now welcomes public comment on Item 6. If you are joining by Zoom, please use the raise-hand feature on your screen to notify us you wish to make a comment. And if you're joining by phone, please press star-nine to raise your hand. Comments will be limited to two minutes per speaker and one speaker per entity. And we have some raised hands. First, we have call-in user one identified on the Zoom. I'm going to open your line. Please state and spell your name for the record, and make your comment.

MR. UHLER: Hello Commissioners, this is Steve Uhler. On this particular item, I'd like to bring up a point for your Chief Counsel. She should probably review 11125(e) of the Government Code for the audit that's supposed to be done per 14911, as it relates to 125(d) of the Government Code. First sentence.

Somebody forgot to send me notice. The only way I know it is because I watch the dockets. So, with that done, you know, the grid is an AC circuit. And back when I was in junior high, you know, when they called it junior high, my electronics teacher told me all about power factor. I-- you really need to bring in power factor.

You also need to be able to augment that with behind the meter data, which you have rights to under 1353. You need to get that published, that data published. I'm talking about some of the things that feed the IEPR as far as data modernization, that you need to get the data out to the public. You also need to be ready to use it, because a lot of your difficulty, no doubt, comes from power factor. I doubt that any of your staff can give you scientific evidence that power factor is not affecting.

So also, on the-- now it's the California Energy Planning Library. What happened to just simply the California Planning Library. Will this library be accredited in any way? And to your government agency, it's good to have accreditation for your library, quality standards and such.

Accurate data in that area. If Tableau is part of your system -- it's not Tableau's fault, Tableau

only reports it. But the background data, I've looked at the structures, there's a-- there's missing data, incorrect data, and there may not be any data dictionary because people are--

MS. RAITT: Thank you for your comment. We also have another raised hand, Tim Ransdell. I will open your line. Please spell your name for the record, state any affiliation, and we welcome your comment.

MR. RANSDELL: Thank you very much. This is Tim Ransdell, T-I-M R-A-N-S-D-E-L-L, with SoCalGas. Good morning, Commissioners. Thank you. SoCalGas would like to thank the CEC for its hard work on the IEPR update, and in particular for including the US Department of Energy's National Clean Hydrogen Strategy and Roadmap in the final 2022 IEPR update.

As we work collectively toward reaching California's decarbonization goals, building a green hydrogen economy to decarbonize both heavy duty transportation and hard to electrify industrial processes will play a critically important role. Referencing federal estimates of greater amounts of green hydrogen serves to support the state's strategic efforts, and it also reinforces the IEPR recommendation to apply for federal funding through DOE’s Hydrogen Hub initiative.

SoCal Gas is committed to developing the green hydrogen economy through projects like the Angeles Link, which could displace three millions of gallons of diesel fuel per day once fully operational. In addition, SoCal gas is partnering with UC Irvine to demonstrate hydrogen blending up to 20 percent levels on sections of the existing campus grid. Finally, SoCalGas recently opened the H2 Innovation Center, which boasts a microgrid based on solar PV in combination with batteries and electrolysis, and blends hydrogen up to 20 percent with existing conventional appliances.

SoCalGas is proud to partner with the Commission and the state on our joint path toward a cleaner, safer, more reliable, more just, and more sustainable future for California and Californians. Thanks very much for your time and your work.

MS. BADIE: Thank you for your comment. I do not see any other raised hands, Chair, so back to you.

CHAIR HOCHSCHILD: Okay, before I turn it over to the Vice Chair for some opening comments, I wanted to just reflect a little bit. You know, the Energy Commission, the authorizing legislation, the Warren Alquist Act, was born out of a crisis, the oil crisis in the mid-seventies. And the IEPR authorizing legislation by Senator Bowman in 2002 was also born out of a crisis,

the electricity crisis of 2001.

And you know, we're facing a number of crises ourselves -- both grid reliability, spiking gasoline crises and so on. And you know, I think we will never be in a period where we're not facing those kind of things in California. But the role here is really to get ahead of it as much as we can and make it better, and I think reduce the number of crises that we face.

I do really want to highlight all the work, both the content and the process. And there's really two outputs I think from the IEPR. You know, one is the report itself. But the second is really the process of putting that together and the exhaustive public comment and dialogue.

And I really, again, Heather, want to thank you for the extraordinary work, not just this year but over the course of your career, on facilitating that so successfully. And also to recognize in addition to the rest of your team that worked on this, I think it's really important we make this content accessible to and readable to the public. And so, Lindsay, especially the summary document that you are putting together to kind of pull out the key highlights, I think is essential to process and making it understandable to the public.

And then finally, Vice Chair Gunda, to you on

top of a very, very full docket of responsibilities you already have, to have taken this on this year. I really want to recognize the incredible work and diligence and congratulate you. So, with that over to you, Vice Chair Gunda.

VICE CHAIR GUNDA: Thank you. Thank you so much, Chair. Thanks for the kind words. I want to start off with a big thank you. And just the IEPR team first, Heather, Stephanie, Denise and Raquel, what a splendid team we have in the four of them. And the entire IT, the support team that works behind the scenes to make all this happen. So Heather, thank you so much for not only being a kind of a fun collaborator, but a wonderful colleague and a friend. These things, when you work on these long things, it bonds you. So, thank you so much for getting us through this year.

On equity, I want to just thank Commissioner Gallardo now. But in her Public Advisor role prior, really led and was the inspiration for the scope of the IEPR to center around equity. So, I just want to say a big thanks to her and Mona, our current advisor, Katrina, and a couple of other people that were stars -- Akruti Gupta, she was an intern for Stanford, Joan Raid (PHONETIC) from local governments. It's just a wonderful group of people that landed that. So,

Commissioner Gallardo, thank you so much for helping focus on equity but also helping land this important work.

Planning library -- Hilary and Kristen and Erica Brand on the land use screens. I could not have asked for more. You know, we started with the idea of a planning library and I know we kind of got a little bit of input from other agencies to make it an energy planning library -- so that there are other planning libraries out there for water and others. When they pop up, there's no confusion. But I did not anticipate the amount of progress we made this year. So, Hilary and Kristen and Erica, thank you so much for your work.

Forecasting is bread and butter. And as Commissioner McAllister says, is foundational to who we are. So, Heidi, Quentin, Ingrid, Jesse, Anise, Bob, Eaton and Mark and-- to name a few. There's a lot more people who work on this, but it's foundational. So I just want to thank you for not only, you know, completing the forecast but taking on these additional steps of overall framework architecture and how we present forecast moving forward to really embrace the idea that forecasting is moving from purely supporting a planning function, to more of a policy function. So, you all taking that position to help inform the

scenarios is extremely helpful. And just before I close on the forecast, just a really, really big thanks to Nick Fugate for his tremendous leadership.

On emerging topics, you know we just heard from the core people, reliability, David, vast integration, Grace Anderson, Chris McClean, Mark Hesters. Gasoline prices, obviously Amanda who just presented, but Gordon who we don't have at CEC anymore, Gordon Schremp. But East Brand and Quentin behind the scenes for really helping craft that. Gas transition, Jennifer Campania. On the DER stuff, you know, Tom Flynn.

Hydrogen, Jane, thank you for your wonderful presentation. But you are also tackling what was supposed to be a one pager, and then quickly evolved to a much massive work that you then compiled it back down. So to you and your team, Peter, you know, Bart, Kevin, Mickey, everybody, thank you so much for all your help.

Just a couple of other high-level people. Aleecia Gutierrez, EAD director. Thank you for your unwavering support of the team and just supporting them to move forward in a good way. I always leave out our office team, you know but I do want to take a moment to say Liz, Ben, Eric Miina, thank you so much for your extraordinary work this last year. We've taken so much

last year as an office, and we could not have done that without each one of us you know working together as family. So, thank you to the four of you for not only doing good work but also helping me stay on the top.

So, one person on the side which I'm going to thank separately Terra Weeks, Kat from Chair's office and Ken, Carol also took contact responsibility in supporting her office. So, thank you Tara. Special thanks to you Carol Robinson, Lindsey, Chris from Media Office. Thank you for all your work.

So, I just wanted to, you know, know at least state hi, thank yous. As Heather mentioned, two points I want to reiterate from Heather's comments. One, this is truly a CEC product, and I think this last year we had an opportunity to bring so many people together, and on how to work on this issue. So, it's an important medium through which the CEC as a whole works together. And then the two -- in the public process and our engagement, so those two functions, I think we've done a really good job last year.

Now reflecting back into early 2022, before we landed the scope we had a retreat and we talked about what the IEPR could be. A few priorities out of that that came up, was we were going to consider a new framing for IEPR. So, three sections.

One was you know a critical piece like equity was the focus. We said we were going to take one core topic and dive deep. Second, we are going to continue and basically do our mandatory stuff like forecast and stuff, which are expected for us to deliver in the IEPR. And third, we were going to have a section on emerging topics. And that's what we tried to experiment last year and I think we did a good job.

And obviously from my perspective, this is one opportunity for staff development. Writing these rigorous thought pieces and assembling these large amounts of words is actually really beneficial for staff to gain and internalize the insights that they're planning to-- or that they're putting out.

So, I think we did a really good job on both landing an IEPR that's about a hundred pages-- Heather. We wanted to be bold and say 50, but we landed at a hundred. But also, kind of this additional function that Lindsay brought in which is the highlights, right, the compendium. I think, you know, that's a good model for staff to be able to continue to work diligently and creating a broad public record for record out there as we take into account these important decisions. But also, a compendium as the Chair mentioned, that's good to digest and highlights the key areas.

So, before I close, as I close this, I mean I didn't talk about equity because I want Commissioner Gallardo to talk about it. I'll defer to her. But one piece is that we have four functions at CEC. The way I think it's -- you know, being the state's data repository, being the state's planning and policy arm, being able to, you know, do our regulatory functions like the codes and standards and siting, and finally the kind of clean energy investment vehicle for the state.

So, we have those four functions. IEPR falls in the first two, data, and policy and planning. And for me, CEC succeeds when we become the ideation platform, the neutral objective ideation platform that really uncovers and raises issues and then puts out recommendations for consideration at our sister agencies.

So, I think you know that's where we should strive towards. I think we did a good job in 2022. And I know that Commissioner Monahan is going to dig into some media topics this year, and look forward to supporting her as we go through. So Heather, a big thanks again to you, and I'll pass it to the Chair.

CHAIR HOCHSCHILD: Great, thank you, Vice Chair. Alright, other Commissioners wishing to comment? Commissioner Gallardo.

COMMISSIONER GALLARDO: Thank you, Chair. So, I wanted to start out with uplifting the work of Vice Chair Gunda. He did a tremendous job with this IEPR, and I want to personally thank you for enabling me to participate as then Public Advisor. It was gratifying and a stimulating experience.

And I am also just extremely grateful to you for being so receptive to bringing in equity and environmental justice so deeply into an IEPR. And I think the Energy Commission has been doing work on equity and environmental justice since its beginning, and now we're doing more to formalize it, to structure it, and just you know embedded in all of our processes, policies, you know, proceedings, and even operations. So, thank you for that Vice Chair Gunda.

I also wanted to thank quickly Mona, our public-- current Public Advisor and Katrina Leni-Konig, our tribal liaison. They were both fundamental to that equity and EJ section, so I wanted to make sure they got that credit. And I know you highlighted them as well, Vice Chair Gunda, but wanted to do that also on a personal level for myself.

So, I'll be quick on the equity and EJ portions because we have a substantial other number of things to go over. But I think it was just great

timing. So, we didn't know that Governor Newsom was going to put out a directive to all state agencies to embed equity into our work. He did that after we already started our IEPR process this year, or for 2022, excuse me.

And it was just perfect timing so that we are going to have the J&I framework available to help us guide staff in our work as we're taking the steps through our action plan. So, all of that will work really harmoniously, and so you know it's just great timing that we did it that way. And the framework really I'm excited about, because it's going to be our north star for the Energy Commission on what we're doing. It'll be a tool for staff to be able to standardize more of the ways that we look at things, how we describe things, how we define things, and you know using terminology such as justice communities and what does that mean and the tribes.

So, I'm really excited about all of that. So again, thank you for enabling me to participate. It was wonderful to see you so graciously manage our internal team, Vice Chair Gunda, in partnership with Heather Raitt and her team. And then also, how you brought in our peer agencies so deeply and thoroughly. So, I you know, learned from that and just really appreciate all

that you did. I'll leave it there and turn it back to the chair.

CHAIR HOCHSCHILD: Thank you. Any other Commissioners wishing to come -- yeah, Commissioner McAllister, please.

COMMISSIONER MCALLISTER: Great. Well, we'll try not to repeat. But I just first want to lead off with just gratitude and acknowledgement of Vice Chair Gunda for your just leadership on so-- on really such a diverse array of topics. I mean the beauty as you said of the IEPR is that it has its core responsibilities, and we take those incredibly seriously. We build, we have a really deep bench and lots of expertise on the forecasting and other areas that we have to focus on in the IEPR.

But the emerging topics areas, I think, are absolutely key, and you did a really good job of identifying the most salient topics of kind of the day and really digging into those. And not just figuring out how to assemble content that's sort of a snapshot, but also, I think, strategically locate some of that work so that it can have continuity going forward. And I really think that innovation of the structure of the IEPR is very insightful and visionary. So just kudos to you for that, bringing that level of kind of situational

awareness and kind of forward thinking.

I want to just -- I will repeat something that you said, Vice Chair, which is that the, you know, the Energy Commission is, I think, becoming really inexorably, and it's very intentional you know, across I think all of our offices, that the-- a world-class kind of node of expertise on energy planning issues. And so with all the data work and the analytical team we're building and just all of the interagency collaborations, making those connections and really trying to stay ahead of these challenges that we face that both you and the Chair mentioned.

You know, we are showing that we can rise to that occasion, and I really think the IEPR has multiple kind of purposes. And building that expertise, providing that experiential base for staff to build the expertise, and then going public and being accountable with that, and then feeding back those lessons into the next time, is just really critical for how the-- the IEPR allows us. We have deep authority that allows us to use it for those purposes as well. So just really kudos for seeing that. And it may-- you know, just really excited to keep that momentum going you know this year, and following IEPRs.

Just a few topics. So, the forecast just

really want to elevate that evolution from just the sort of data driven and econ-demo and the traditional ways that we've done it, moving it to be more salient from a policy perspective. So, I think that absolutely has tons of value, include just having a baseline and then having scenarios that really do express our policy directions. And I think that also should be carried forward in future IEPR's. And this-- you know, obviously this year will be a full forecast. So, the rubber will really be hitting the road there.

And finally, I guess I just wanted to mention the emerging sort of even more complete engagement across many themes in the IEPR, but definitely forecasting. But many of the themes, you know, you heard the CARB scoping plan, and the State Implementation Plan, and just many kind of parallel efforts that are happening in our sister agencies. Plenty, you know, the DER work, and the multi-- rate making work over at the PUC.

Having the conversation in the IEPR embrace those and begin to put numbers to those efforts and really sort of map where the other agencies are saying and planning to go, saying they're going and planning to go, mapping those over into our work so that it just-- we are keeping it real. I mean I think that's the goal,

right? Is to really keep it grounded, and not sort of spin off into theory and sort of let the models drive it, but actually let the reality drive it and build the models to reflect and incorporate the policy direction.

And so, I'm really, you know I think on the for example, the big energy policies to essentially sunset combustion heating devices by 2030, that is going to move the needle in a huge way on buildings. And so that's new news, really, that we're utilizing our respective authorities in ways that really are going to you know, provide a hockey stick for the marketplace. And I'm really, you know, projecting that five, 10 years out is key, and then building that into the forecast.

So, I'm just really happy with the way the structure and the content of the forecast is evolving, and just kudos to the whole team. Heather, you know, as usual, we don't take you for granted, but you're just so good. And just really so ably, you and your team sort of embody the competence that the Energy Commission seeks to build across the board. So, thank you so much for all your efforts. And I'll pass it back to the Chair.

CHAIR HOCHSCHILD: Thank you. Commissioner Monahan?

COMMISSIONER MONAHAN: Yeah, I'm going to be

brief. But it was actually just great to hear everybody comment on all the benefits of this year's report, and just highlight the amount of work and the number of people that went into creating this report. So it's just really impressive.

And I want to start, well first to you Vice Chair Gunda for your leadership and vision. And just I want to say, you know, as the person who's going to be leading this year's energy policy report, that you have given me sort of shoulders to stand on. Well, you together with Commissioner Gallardo, then Public Advisor Gallardo, and just really the amount of opportunity we have to use this report to help consolidate sort of the best thinking across the state, across all agencies.

I think as you said, Vice Chair Gunda, that an opportunity for ideation that we don't want to publish a report that really just speaks to us, but we're trying to publish a report that speaks to the state. This isn't a parochial effort of one agency, it really is meant to be a report that informs energy policy at large across the state. So, excited for that opportunity, excited to work with you, Vice Chair.

And I -- one of the many things I really appreciate about the Energy Policy Report is that it gives us a chance as Commissioners to talk to each

other, and to brainstorm and really to have open conversations that we must have in public when we're dealing with policy, energy policy issues. So that is just something really valuable that I deeply appreciate.

And I want to also emphasize that Vice Chair Gunda, you were the one who was like, let's have ongoing proceedings like gas decarbonization that have long trajectories but then embody in the IEPR sort of the key lessons learned. And that is also something we're going to take into this year's IEPR.

And I actually look forward to exploring how we continue to deepen our attention to equity and what that looks like. Last year there was a big focus, you know what makes sense for this year in terms of building on that and highlighting that. And I think that's something we need some input from you, Commissioner Gallardo, about what your best thinking is, and also the Public Advisor.

So, I just want to say finally, that I think that we learned a lot from last year and this year we're tackling huge topic in terms of just how do we speed the interconnection, deployment of clean energy resources on the grid. And doing it from a cross agency perspective, doing it from a perspective of equity are all things that I'm taking into this year's IEPR.

Oh, also though I want to award for anybody who can come up with a better term. I'm calling it Energy Policy Report. There's a better term. I think at this point, integrated energy is redundant; energy is integrated by its very nature. So anyway, anybody who comes up with a good term of art, I will take you out to a nice dinner. And I pass it back to you, Chair.

CHAIR HOCHSCHILD: Thank you. With that I would welcome a motion from the Vice Chair on Item 6.

VICE CHAIR GUNDA: Motion to move Item 6.

CHAIR HOCHSCHILD: Commissioner Monahan, would you be willing to second Item 6?

COMMISSIONER MONAHAN: I second.

CHAIR HOCHSCHILD: All in favor say aye. Vice Chair Gunda?

VICE CHAIR GUNDA: Aye.

COMMISSIONER MONAHAN: Commissioner Monahan?

COMMISSIONER MONAHAN: Aye.

COMMISSIONER MONAHAN: Commissioner McAllister?

COMMISSIONER MCALLISTER: Aye.

COMMISSIONER MONAHAN: Commissioner Gallardo?

COMMISSIONER GALLARDO: Aye.

COMMISSIONER MONAHAN: And I vote aye as well. Item 6 passes unanimously. And now I've been waiting

all day to say this, on with the wind. The preliminary assessment of the economic benefits of the offshore wind related to seaport investments and workforce development. Welcome, Paul Deaver.

MR. DEAVER: Good morning Chair, Vice Chair and Commissioners. My name is Paul Deaver. I'm in the Siting Transmission and Environmental Protection Division on the Offshore Wind Team. Today I'm going to present the preliminary assessment of economic benefits from offshore wind as required by AB 525. Before that, a quick background on AB 525.

Next slide, please.

AB 525 became effective on January 1st, 2022, and it tasks the CEC, in coordination with an array of specified local, state, and federal partners, and with input from stakeholders, to develop a strategic plan for offshore wind energy developments installed off the California coast in federal waters by June 30th, 2023. The strategic plan will be informed by several interim work products, including this report that I'm presenting today. The strategic plan will be informed by the CEC's Conceptual Permitting Roadmap for offshore wind energy facilities, which was published and workshopped in December of last year. The strategic plan will also be informed by the CEC's Offshore Wind Planning Goals

report published and adopted in August of 2022.

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A California offshore wind industry could produce significant near-term and long-term economic benefits for California. Port and waterfront investments can serve as a significant economic driver to local regions and the state, potentially resulting in hundreds of millions of dollars in new economic activity. This could also create a wide range of good paying jobs that require skills, training and education. Most jobs would likely be in the supply chain and manufacturing sectors, providing opportunities for long-term skilled positions for Californians. Also, investment and spending related to port and workforce development could generate tax revenues at all levels of government including state, county and city or local levels.

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Seaports, or ports, are essential for the development of a new offshore wind industry in California. They are an important driver of potential economic benefits including job creation and economic growth opportunities. They have the potential to serve as strategic hubs to support a workforce that can assemble, fabricate, install, and operate and maintain

offshore wind turbines and related components. Initially, California ports may not be able to handle all the required activities to support industry development. Significant investment is needed to develop port facilities necessary for the construction and transport of floating offshore wind turbines.

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A wide range of skill sets and occupational types will be required for the offshore wind workforce. Some of these include construction, manufacturing, engineering, operations and maintenance, sales, as well as maritime services. Many other jobs will also be needed such as longshoreman and tugboat and other watercraft operators. Most of the new offshore wind related workforce will require training and or certification that matches the pace of deployment for offshore wind, particularly for construction and manufacturing.

Next slide.

Staff reviewed several studies to understand the potential economic benefits associated with court investments and workforce developments needed to support offshore wind energy. The studies made various assumptions about how much and when offshore wind capacity is built, the sourcing of content, whether it's

domestic or foreign, scope of the supply chain, the technology types, and a geographical scope of the economic benefits. These studies generally indicate that to realize economic benefits from offshore wind, it must be developed at scale.

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Fixed bottom offshore wind has been commercially deployed on the East Coast, which is more mature than the floating offshore wind technology that's going to be required on the West Coast. Staff reviewed studies from the East Coast to understand the potential economic benefits from developing fixed bottom offshore wind industry, and how the floating offshore wind industry on the West Coast could learn from some of these experiences.

Some East Coast states have invested in the hundreds of millions of dollars into seaports. For example, New Jersey has allocated over 500 million in public funding to develop the New Jersey wind port, which is going to be the first purpose-built offshore wind marshaling and manufacturing port in the US. The New Jersey wind port is expected to create over a thousand jobs and 500 million in economic output during the construction phase. This using union workers and targeted hiring practices. The New Jersey wind port is

expected to support manufacturing, construction, operations and maintenance, and produce thousands of jobs per year and up to 500 million in economic output per year.

In New York, they assessed the existing ports and infrastructure to understand which ports could support the construction and maintenance of offshore wind energy, and they found that most of the port locations will need upgrades. In 2022, the New York governor announced a $500 million investment into offshore wing port infrastructure and supply chain development. This $500 million investment is expected to leverage more than $2 billion in private capital while creating more than 2,000 jobs. Other East Coast states like Maine and Virginia are not quite as far along yet as New York and New Jersey, but those states are starting to invest in an offshore wind roadmap and port upgrades.

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Because ports and waterfront facilities are critical for developing a domestic offshore wind industry, California has started making strategic investments to prepare ports for offshore wind. In March of 2022, the CEC approved a $10 million grant to the Humboldt Bay Harbor District to support the

development of a new multipurpose offshore wind marine terminal at the Port of Humboldt.

In September 22, AB 209 authorized the CEC to create and administer a new program to support offshore wind infrastructure improvements that advance the capabilities of California ports, harbors, and other waterfront facilities to support buildout of offshore wind facilities and maximize the economic and environmental benefits of offshore wind to California. As part of AB 209, the 2022-2023 state budget appropriated $45 million to the CEC for this program. This is to be developed in 2023. Most of the $45 million is expected to be used to provide incentives to support offshore wind infrastructure.

CEC has started to explore starting the rulemaking process including timing, preparing workshops for discussion and input prior to drafting proposed guidelines. Starting in March of 2024 CEC will prepare annual reports for the budget and relevant policy committees of the legislature that will track funding expenditures, describe how the funds are used to meet program goals, and also estimate electric reliability and GHG impacts from the programs.

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California is pursuing recent federal funding

made available by the Inflation Reduction Act of 2022, the Infrastructure Investment in Jobs Act, along with Department of Energy funding to support offshore wind development and investment in local voting offshore wind supply chains. These programs includes incentives and tax credits including production and investment tax credits, as well as competitive grants to support offshore wind. The US Department of Energy FLOWIN prize investment targets opportunities to grow the domestic manufacturing and supply chain capabilities to support floating offshore wind.

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AB 525 requires the CEC to complete a preliminary assessment of economic benefits of offshore wind related to seaport upgrades and workforce development needs and standards. This report meets the statutory mandate. The Preliminary Assessment Report was released in mid-December 2022, and a workshop was held on December 19th, 2022. Other related workshops were held throughout 2022, including two in October.

Comments for the report were due by February 8th. The CEC received over 20 comments on the report. Most of these were positive, and included comments from labor organizations, environmental groups, local governments, fishing industry groups, industry

representatives, and the Northern Chumash Tribal Council.

The Preliminary Assessment Report was finalized and docketed on February 24th of this year. The preliminary assessment of economic benefits will inform the AB 525 Offshore Strategic Plan, which is due by June 30th of this year. The strategic plan will address many of the comments received, including identifying potential impacts to coastal resources and fisheries and strategies to mitigate those impacts, as well as workforce development.

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So, for some of the comments received, labor organizations generally stress the importance of using local unionized labor for California to realize the economic benefits from offshore wind. They commented that training and apprenticeship programs can help provide economic and job opportunities in underserved communities.

Some of the environmental groups commented that offshore wind development should consider social benefits along with the economic benefits, such as clean air, quality of life, electric reliability, those sorts of things. They also commented that offshore wind development should consider potential environmental

impacts and strategies to mitigate them. Offshore wind should be developed sustainably and safely to avoid and minimize environmental impacts.

It's important to consider strategies for prioritizing equity in workforce development, including local and targeted hiring to support disadvantaged communities. Community benefit agreements should be required as they can create sustainable economic benefits and opportunities for underrepresented communities and help mitigate impacts to local communities.

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Fishery groups commented that offshore wind development should consider social and environmental impacts from developing offshore wind industry, including air pollution from port construction and loss of access to fishing ground when measuring economic benefits. They also commented that the report should consider job impacts to fishing and related industries including vessel operators, fishing gear manufacturers, tourism, and bait shops. They also commented that the report should have a plan to account for and mitigate impacts to the fishing and related industries.

The Northern Chumash Travel Council commented that offshore wind development should occur with marine

protections and conservation efforts, equitable mitigation measures for any impacts and fair community benefits agreements.

Local governments commented that the CEC should work with local workforce planning entities, such as the Humboldt County Workforce Development Board, to understand local workforce impacts. They commented that these investments by local entities could help to minimize negative impacts from offshore wind, and guide mitigation efforts and tailor proactive benefit measures for local communities. The CEC received another comment that the report should consider the economic benefits of ports using non-fixed large floating docks, or sometimes called at-sea assembly terminals, for installing offshore wind resources nearshore.

To reiterate, this report is a preliminary assessment of economic benefits that is required by AB 525. Many of these comments will be addressed in the strategic plan.

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That concludes the presentation. The Energy Commission, or the CEC, recommends approval of the final staff report, Preliminary Assessment of Economic Benefits of Wffshore Wind Related to Seaport Investments and Workforce Development. I'm happy to answer any

questions you have. Thank you.

CHAIR HOCHSCHILD: Thank you so much, Paul. We'll turn now to public comment on Item 7.

MS. BADIE: Hello, this is Mona Badie, the Public Advisor. The commission now welcomes public comment on Item 7. If you are on Zoom, please do use the raised-hand feature on your screen to notify us you want to make a comment. And if you are joining us by phone, please press star-nine to raise your hand. Comments will be limited to two minutes or less per speaker and one speaker per entity. Please wait for me to call on you to make your comment.

Alright, we have a few raised hands here, Varner Seaman, I'm going to open your line. Please spell your name for the record, any affiliation and you are welcome to make your comment.

MR. SEAMAN: Thank you. My name is Varner Seaman, V as in Victor, A-R-N-E-R, last name Seaman, S-E-A-M-A-N. I'm with American Clean Power California. I work as the program director for the Offshore Wind Program at ACP California.

I want to just take a moment to thank the staff, to thank Paul and the rest of the team that have been working on this important work as part of the AB 525 report. Both this component of AB 525 work as well

as the other components that are going to be completed over the next few months for the final report that's going to come out this summer. We also want to thank the Commissioners for all of your ongoing efforts and leadership on this important work for offshore wind.

What we appreciate in this preliminary study on economic benefits is it recognizes that there are significant economic benefits that offshore wind can provide to the state of California. And we agree with our partners in organized labor that there are tremendous job benefits in providing highly skilled and trained workers working in high quality jobs for folks here in the state of California.

At the same time, offshore wind will lower carbon emissions for the state electrical sector. It provides an important resource that integrates well within the system which lowers costs for consumers in the state of California while increasing reliability. We also appreciate that the report noted that the economic benefits from offshore wind come from deploying at scale, which I think is aligned with the leadership that the CEC showed earlier in the AB 525 process last year by adopting very strong targets for both 2030 and 2045, with a target of at least 25 gigawatts of offshore wind by 2045.

So, we look forward to partnering with the CEC Commissioners and staff as we go forward at ACP in this important work. And we just want to again thank the staff. We know that this is quite a big push, it's a huge effort, but we really appreciate your professionalism. The access that we've had to provide input is appropriate and we really look forward to partnering with you over the next few months. Thank you all very much.

MS. BADIE: Thank you for your comment. We also have Tom Hafer, I'm going to open your line. Please state, spell your name for the record and any affiliation and make your comment.

MR. HAFER: Can you hear me?

MS. BADIE: Yes.

MR. HAFER: Okay. I'm Tom Hafer, Tom H-A-F-E-R. I'm the president of the Morro Bay Fishing Organization in Morro Bay. In our opinion, the construction of large facilities on the central coast makes no environmental sense or economic sense. There are minimum natural harbors protecting where they are considering putting these large ports. There will require mile-long huge jetties to protect them from huge surf and surge that we have, especially on a south wind.

The jetties will also entrap sand that will

cause the need for millions of dollars of additional dredging every year or even maybe twice a year. These are being placed in the middle of tourist towns where people travel for miles to get away from industrial cities to quaint fishing villages as in Morrow Bay and Port San Louis. They don't want to see concrete platforms, giant cranes, and hear the clanking of steel while they're eating their fish dinner along the embarcaderos.

The port infrastructures have not been-- the port infrastructure plans have not been transparent to the public at all. I mean the only reason we even know about this, the fishermen, is because of REACH. The proposed-- and in all these ports are proposed in prime fishing grounds, especially Diablo and China Harbor. You know, possibly Morro Bay could have a small operation. Maintenance vessels come in a couple of them.

But you got to remember that Morro Bay has a main rookery for sea otters. That's where they have their babies. And it's also a humpback highway right outside from point conception to Point Sur is a main highway for humpbacks.

MS. BADIE: Thank you for your comment. Next, we have Manley McNinch. Please unmute on your end and

spell your name for the record and make your comment.

MR. MCNINCH: Good afternoon, Manley McNinch with the Southwest Mountain States Regional Council of Carpenters. My last name is McNinch, M-C capital N-I-N-C-H. And I'd just like to thank Mr. Deaver and everyone else on the really good report on the need for upcoming ports. Without the fortifying and building of new port structures, it's going to make it really hard for the offshore wind developers to pursue and meet the requirements that are out there.

As we all know, ports are kind of scarce at best going up and down the coast. So, it definitely going to be a need to build varying ports type going up and down. You know they provide varying services. Not all-- just one big huge port, but I've seen a couple of reports out there about the potential of putting smaller reports pop-- excuse me, smaller ports up and down the coast, which makes a lot of sense. That way we're not coming in and just wiping out a place like Morro Bay. So, it sounds like a good thing to do.

The need is there for everything that's being discussed in the meeting today about offshore energy, getting the structures in place, the carbon neutrality. And as far as the jobs and a just transition of good paying jobs goes is extremely important. And the

Southwest Carpenters Union's been working out and reaching out, talking to some of the developers and some future suppliers for the projects that are coming up. And we're making a lot of good transition, transitional type talks and everything of the potentials for the upcoming partnering in this area.

We have a brand new state-of-the-art 30,000 square foot training center that'll be opening in Santa Maria, which the developer is going to be able to utilize to help train their workforce up and potentially some of the suppliers as well. So, as we get closer to that, hopefully we'll be able to you know, get more and more support on board to get the ports going cause it's critical. And I thank you for your time. Have a good day.

MS. BADIE: Thank you for your comment. Next, we have Claire Warshaw. Claire, I'm going to open your line. Please spell your name and any affil-- your name for the record and state any affiliation. You may begin your comment.

MS. WARSHAW: Hi, my name is Claire Warshaw. I'm a member of the public. My name is spelled C-L-A-I-R-E and then W-A-R-S-H-A-W. And I am interested in commenting on this item about offshore wind because as a perspective, as a designer I had thought long ago, I'm

not sure how they could be designed, although you know I'm not saying that it can't be designed. I absolutely understand it can be. It's just that the cables are, from what I understand, the shelf off of the California coast is so deep those it are kind of offshore wind will require cables.

And then I start to think about whales. And I had thought about this a long time ago. Recently, there's been a news story from the East Coast where a bunch of whales have beached themselves. And one of the big concerns was this, the offshore wind that caused this. And so far from what I've read, it is not according to what they have, what the whale autopsy professionals have determined so far.

So, I think we can be glad if that is the case and that it is something else. They've blamed shipping which is kind of unusual, but in case they're covering up or something like that, I do think we ought to be concerned in California. It-- they've already invested so much over there. I could see why they might cover up. And energy people, you know, they're not that good at telling us stuff sometimes.

So, I would say in terms of this item on the agenda, employing biologists might be well worth California's money. And also, it's a profession and

it's not considered a lot as equal as an engineer. But there are ocean biologists and they could maybe do something to help our whales not run into cables, make some kind of whale freeway or something. You know, pay attention to these large mammals. Also the algae and things like that, that our ocean needs to be healthy. And that is an economic boon too. So, I do think that that could be considered as part of the offshore wind economics. Thank you.

MS. BADIE: Thank you for your comment. Those are all the public comments that we have. Back to you, Chair.

CHAIR HOCHSCHILD: Well, thank you so much for all the members of the public for sharing those comments and to the whole team that worked on this. Paul, you and your colleagues, and in particular Elizabeth Huber for all the diligence, really happy to see this moving forward. And just to reiterate, you know, this is yet another example of where our climate and our industrial policy are inextricably intertwined.

And so, this is you know, one of the key pillars of our energy and our economic strategy over the next 20 years as we push forward to build out offshore wind and make it a reality in California. And absolutely committed to robust, sustained public

engagement throughout the whole process to get the benefits of everyone's input, and do that in the most environmentally and community sensitive manner that we can.

So, with that, let me just open it up to other Commissioner comments. Anyone wishing to chime in? If not I would ask -- let's see, Vice Chair Gunda, would you be willing to move the item?

VICE CHAIR GUNDA: Yeah, move item.

CHAIR HOCHSCHILD: Okay. Is there a second? Commissioner Gallardo, would you be willing to second that?

COMMISSIONER GALLARDO: I second Item 7.

CHAIR HOCHSCHILD: Okay. All in favor say aye. Vice chair Gunda?

VICE CHAIR GUNDA: Aye.

COMMISSIONER MONAHAN: Commissioner Gallardo?

COMMISSIONER GALLARDO: Aye.

COMMISSIONER MONAHAN: Commissioner McAllister?

COMMISSIONER MCALLISTER: Aye.

COMMISSIONER MONAHAN: And Commissioner Monahan?

COMMISSIONER MONAHAN: Aye.

COMMISSIONER MONAHAN: And I vote aye as well.

Item 7 passes unanimously. We'll turn on to Item 8, Clean Energy Reliability Investment Plan.

MR. ERNE: Good afternoon, Commissioners. I'm going to be covering two items that are required for the CEC from SB 846 to bring to you for adoption prior to them going to the legislature. The first one is the Clean Energy Reliability Investment Plan.

Next slide.

The plan is to be developed by the CEC for addressing some critical issues that the state needs around clean energy. Accelerating deployment of clean energy resources and reducing greenhouse gas emissions are critical to that, but also supporting reliability, as well as supporting demand response and the loading order are the requirements for the Clean Energy Plan to address.

The plan is intended to identify initiatives for up to $1 billion in resources that would be appropriated by the legislature. So, they have not been appropriated yet. They would be appropriated over three years. The first year being this year would be a hundred million and then the subsequent two years would be 400 million and 500 million for the legislature to appropriate.

Next slide.

As I mentioned earlier in the IEPRR overview, but I'll recap here as well, we've identified three critical challenges that we think are important to take into mind as we are identifying initiatives for this clean energy plan. The first is planning. So, as I mentioned before, we have a critical need in the state to improve our planning processes. I mentioned previously transmission planning, engaging with communities was identified in the equity portion of the IEPR to ensure that we are bringing in the needs of communities, particularly those in justice communities that are often left behind in the clean energy transition, to ensure that they're brought into this process and they're available-- their information is available to us to make sure that we're planning appropriately.

For resource scale, we have the need to diversify resources both in the supply side and the demand side, but primarily on the demand side it's critical for us to expand those resources to ensure that we're putting resources close to the load and addressing the needs of customers.

And lastly, extreme events. We continue to have more frequent extreme events and longer extreme events, and I'll talk about that a bit more in the

Diablo session next. And having resources available to augment the existing resources to ensure that we can ride through those extreme events.

Next slide.

So, we have identified four different funding priority buckets if you will, and mapped those to the reliability challenges. The first one is planning and enabling structure. So, this is addressing those planning items that I talked about previously, but also the items that are more in the administrative side of things that tee up solutions that are in the scaling resource area.

Those would include transmission planning and community engagement, which I mentioned. But also, and I'll talk about it in a little bit, the need to scale up large resources. So, there's certain large resources like we heard offshore wind, geothermal, that are very large investments, hard for individual load serving entities to be able to finance, and having a central procurement function in the state to be able to do that would be helpful in teeing up those resources even ahead of them being called for in CPUC procurement orders.

And also, as I mentioned previously, interconnection and permitting continue to be a problem with getting the scale that we need of new resources

online. One of the challenges with getting these resources is the delay that happens for the interconnection process and permitting process. Those are the planning elements being incorporated into the first bucket.

The second bucket, as I mentioned, is demand side resources. So, these resources are those that are going to be supporting our customers most closely. Demand flexibility is something we know that we need to expand within the state, and having initiatives that continue to expand demand flex and look for new alternatives to improve our demand flexibility. And I'll talk a little bit about vehicle-grid integration and vehicle to building as another new way as we build that out to be able to provide demand flexibility. So, we feel there is a desire to have more demand flexibility and more solutions within that toolbox of demand flexibility like vehicle-grid integration.

And we do expand upon the types of distributed generation that we have. Primarily now it’s solar and storage, having things like linear generators, fuel cells, other types of technologies to get a greater diversity in our portfolio.

And lastly, we think there are opportunities to have innovation grants. These grants would be to

fund new ideas that we haven't thought about before that may not fit into traditional existing programs that are available currently at the CEC or CPUC or other entities. So new structure to the way that we can do things.

We have similar buckets for the-- or similar initiatives in the scaling of supply side resources, scaling those large technologies including expanding long duration storage. So, building on the success of the long duration storage program that CEC currently has and doing more of that. Those are particularly valuable during the net peak period. And innovation grants in this area as well.

And lastly, augmenting for extreme events. The strategic reliability reserve was established last year, heard about it during several of the topics this morning. The Demand Side Grid Support Program and the Distributed Electricity Backup Assets Program, both run by CEC, would benefit from additional resources to help build those out to provide those resources during extreme events. As you can see in this slide, we map those funding priorities to the types of challenges, reliability challenges we've identified, and how they can support those areas.

Next slide.

The plan lays out funding areas for each of these main categories. As you can see, we have frontloaded on planning and enabling structures to get the system set up, get 'em in place, get them running, and then that element is funded less or proposed to be funded less in the subsequent two years. We have a substantial amount of scaling of demand and supply side resources. Those ramp up primarily in the second and third year where the allocations would be 400 million and 500 million from the legislature. So, funding more of those higher cost projects in those second two years.

Of those two, we've applied more funding towards the demand side than the supply side, as we feel there's a lot that can be gained from the demand side resources. As I mentioned then, extreme event support, we'd continue to have that over the subsequent three years of the program leading to a total of the 1 billion identified in SB 846.

Next slide.

This slide shows the detail breakout for the first year. This is consistent with the governor's proposed budget from earlier this year. We would lay out discrete projects to support transmission planning. As I mentioned, community engagement, which is critical to get feedback from community-based organizations.

Supporting the standup of the central procurement function, this funding would go to DWR to stand up that function as an alternative for the state. And then support for smoothing out or increasing the ability to do more permitting and interconnection.

No funding proposed in the first year for scaling of supplier demand side, and then 33 million supporting extreme event, with 10 million for administration from the CEC. That provides the 100 million of the first year proposed in the governor's budget.

Next slide.

With that, I put forward this plan for your -- and the proposed resolution to adopt the plan so that it can be submitted to the legislature for consideration for the appropriations for the 1 billion. I'm open for any questions you may have.

CHAIR HOCHSCHILD: Thank you so much, David. That was terrific. We'll go to public comment on Item 8.

MS. BADIE: Thank you chair. This is Mona Badie, the Public Advisor. The Commission now welcomes public comment on Item 8. If you are on Zoom, please click the raise-hand feature on your screen to notify us that you want to make a comment on this item. And if

you're joining us by phone, please press star-nine to raise your hand. Comments will be limited to two minutes or less per -- or two, excuse me, two minutes per speaker, and one speaker per entity. And I will call on those who have raised their hands.

We have one raised hand at this time. Call-in user one. I will open your line. Please spell your name for the record and make your comment.

MR. UHLER: Hello Commissioners, this is Steve Uhler, U-H-L-E-R. I heard about interconnects. I take it that means hooking distributed resources up. And there's been a lot of hold up on that I understand, particularly in solar. There was a report back in '13 about assumptions that were made about solar.

And here I go with my power factor thing again. I truly believe that your not understanding power factor is causing a problem. There's a tool called SPICE, been around for ages. I think it's out of Stanford University. That's what made Silicon Valley.

You can't breadboard a little tiny IC, so this device mimics that. It could easily be used on the scale of the grid. The grid is actually quite simple compared to something like a 6502 processor, or an 8088, or any of those processors. It can actually tell you what the ramifications would be. And since it's only 60

hertz compared to gigahertz on processors today, you could really dial that in. You should look into SPICE. It can be tailored probably to just about anything. You got Stanford University folks who probably could help out. You should look into that. Thank you.

MS. BADIE: Thank you for your comment. That is the only raised hand we have. Back to you chair.

CHAIR HOCHSCHILD: Thank you. Let's go to Commissioner discussion, starting with Vice Chair Gunda.

VICE CHAIR GUNDA: Yeah thank you, Chair. Just want to say thank you, David, so much for that clear and thorough presentation. I just want to frame this for the Commissioners and the public, you know the setup for this investment was a unique opportunity to propose funding for areas that we've identified as the opportunities to either support deploying resources, or reduce barriers to resources being brought online quickly, as David mentioned.

So just to kind of make sure that we highlight this, you know a few principles in developing the plan are to support reliability, support the clean energy, transition, support affordability, and for support and complement existing programs while not duplicating them. So that would be important as we continue to move forward with the deployment. So, the first step of this

was to really help frame broadly the barriers, the challenges, and how we should invest. And David did an excellent job on explaining the thought process behind that.

But as we move forward with the legislature and as we present to the legislature, depending on their support and making sure that money is appropriated, as we begin to implement this we really need to figure out guidelines for specific buckets, and how do we then support affordability but also support and complementing existing programs will become next step. So, look forward to engaging with CEC and how best to do that.

Also want to commend the plan, you know, specific emphasis on demand side resources. The state has really put in some huge budget items in the last year on the transportation side as well as building decarbonization side. And we think that the demand side funding would help both complement you know the broader electrification pathways but also really help improve resiliency in communities you know which are really vulnerable. So, I think that's another important element that we'll be working through.

Another point, we've mentioned this that during the last public meeting, the next part of the 846 is to develop a load flex goal. And it's really

important for us to figure out how the load flex goal, the CERIP money, the DSGS money, the DEBA money all complemented together and ensure that existing programs are really leveraged.

And want to close with big thanks to the CEC team. David Earn has been nothing short of extraordinary this last 18 months on jumping in with so many pieces. I mean it's like almost-- we don't have a spare tire. It's like David is the wheel, and the tire, and everything. And the importance of the extraordinary amount of work he does not just the time, but this takes a lot of thoughtfulness and making sure you conduct yourself well with other agencies, and not implode under the pressure of time and the asks from everybody. So, David, you've been doing an extraordinary job.

And he is definitely complimented by Damian on our administrative side, Kristen Widdifield who recently joined on supporting the coordination of reliability activities. Liz and Ben and Eric from our office, and also colleagues from PUC.

This has been a collective work and being shepherded at so many different levels. President Reynolds and her office Luom, Grant Mack from PUC, CARB, you know Chair Randolph and her team, and also partners at DOF and GO that all advise on how to move forward in

a way that's really constructive. So just again, David, a big kudos to you.

And in closing I do want to note a thanks and appreciation for Chair. Chair is behind the scenes reliability. Oftentimes I get to present them, but without diligence and his support on how best to spend this time-- spend this you know, both our time and money. And also his team in terms of Kat who comes from legislature, her insights into you know what the legislature was hoping to achieve from all this last year.

And I think we have a fabulous team in house. And Drew and the executive office, the CCO, the Public Advisor's office, this is a collective effort. Also want to call out RETI and siting and their directors for their enormous contribution to this work. So overall wonderful work David, look forward to supporting it and continuing the conversation and making sure we do a good job for the state of California. So, thank you.

CHAIR HOCHSCHILD: Well said, Vice Chair. And I would just like to add my thunderous endorsement to those comments. And David Erne, in particular for you. I just have really appreciated your steady hand at the wheel, and your professionalism in some very, very challenging moments we've had over the last few years

with reliability. You know, your professionalism has really shown through. And I want to just recognize that publicly.

And all the colleagues that you mentioned. You know, when the going gets tough, the tough get going. I feel great about the group that we have on this. So just a really thunderous endorsement.

Unless there are other comments? Oh, commissioner Monahan. Yes, please.

COMMISSIONER MONAHAN: Yes. Well first I just want to say that I thought vice Chair Gunda never slept because he was working all the time. And now I worry about David, because he's producing an amazing amount of work for us. So just thank you, David, for all you're doing to help keep the lights on in California.

And I have just one question. Well maybe two questions. One question was just around the 15 million for addressing barriers including permitting and interconnection delays. Could you just flesh that out a little bit for me about what that might consist of?

MR. ERNE: Sure. So, primarily there are a couple different areas where we have delays; both from some of the state agencies and also from local counties. So, the feeling is that we could possibly provide grants or for states to interstate or interagency transfer to

help support bringing on more people, either individuals or consultants, to help with that permitting backlog. Because right now we have so many projects that are waiting to be reviewed. It's really has become a manpower issue, or a person power issue, to get all of these resources through the process. And so, ways to be able to do that more efficiently is what we'd be looking for.

COMMISSIONER MONAHAN: So, is it possible, David, I mean in terms of the adjustments to the investment plan, could you, in years two and three, have adjustments based on lessons learned from year one investments? Like could it be that, oh we did this and we actually found it really did speed permitting. So, if we gave local agencies more money to hire more staff or to contract out, that could really speed the process?

MR. ERNE: Yeah, we are looking for some flexibility in terms of the opportunity working with the legislature on how we can reallocate. We certainly feel that there would be value in having that flexibility among different pots of money so that we could make that advantageous. But it'll depend upon that conversation with the legislature.

COMMISSIONER MONAHAN: I see. So, will an

investment plan have to be done every year? Will it be revised? Or is this sort of fixed unless the legislature makes changes?

MR. ERNE: The request was for the original plan, and so we'll work with the legislature in, you know, laying it out in this way and then building out the individual elements.

COMMISSIONER MONAHAN: Okay, thank you.

CHAIR HOCHSCHILD: Any other? Oh yeah, Commissioner Gallardo please.

COMMISSIONER GALLARDO: I think Commissioner McAllister had his hand up first, so I'm going to defer to him and then I'll go after him. Go ahead.

COMMISSIONER MCALLISTER: No, go ahead. Go ahead. Absolutely, go ahead.

COMMISSIONER GALLARDO: All right, well then, I'll keep it quick. I wanted to highlight, and I don't think anyone will be surprised by this, the monies being put toward the community engagement piece. I think that's so tremendously important, and I'm glad that, you know, that's there. You know, we're acting, not just talking about the importance of equity and EJ and here's an example.

And David, I also want to acknowledge you for the great work you do. And every time I talk to you, I

feel like I learn something, and I've told you this. I wanted to highlight it here.

And so curious to learn a little bit more if you know, is there a plan on how that community engagement money will be allocated? Like, you know, to what types of components? Or is that something that will be -- that you'll plan later on? I'm just curious about where you're at in that phase.

MR. ERNE: Yeah, so we want to -- we haven't put a fine point on exactly where the grants would be going, but we know there are a number of initiatives that CEC is working on that involve or would benefit from engagement with community-based organizations.

We want to make sure that we organize it in a way that we can have that engagement with them that makes it the most efficient for them, you know obviously with the reimbursement, but we have the building decarb program, we have SB 100, we have a number of these activities that are going on where we're going to engage them and we want to try to do it in a thoughtful way. And Commissioner, or excuse me, Vice Chair Gunda, did you want to make any comment on that?

VICE CHAIR GUNDA: No, I think David you mentioned it really well and I think the only point to elevate their-- so Commissioner Gallardo, I think that

one of the things we are hoping, and hopefully you're tracking this. As a part of 846, there was a I think 205, there was a $30 million for community development at CPUC, right? So, this would be incremental to that.

And you know, while the CPUC broader scope will be to support all state work, and we could have some input, we are looking for this to-- you know, we've had some stakeholder feedback. And again, once the money gets appropriated, we'll have some sort of a process on how best to deploy this money as David's mentioning. But some emerging thoughts are potentially having regional support on even stitching together all the pockets of money that we are putting out there towards community-based reliability and resiliency, right? So that's one piece that's kind of emerging.

And the other element that's emerging specifically in this area is to figure out how best to scale existing monies, right? So, if we have monies from CPUC, how do we intersect with this money and help move things forward? So, we are in active discussions on that and look forward, you know, obviously to your engagement and your guidance as we move forward with the plan.

COMMISSIONER GALLARDO: Thank you, David. Thank you Vice Chair Gunda. I would be happy to

participate in those conversations. And you know, this just, again, is reflecting what we've heard from communities about their needs for compensation when engaging, and to, you know, be doing it in this way just makes me really excited. So, thank you. And I'll turn it back to the Chair. Commissioner McAllister?

COMMISSIONER MCALLISTER: Yeah. Great. Well thanks. And so, I want to just continue on a pace on that theme. I mean lots of diverse resources. I mean I think this is the future that we're going into is that we have many more and different resources, and we have to learn how to stitch the pieces together in a quilt that actually, you know, fits the bed.

And so, the demand side, you know, really obviously happy to see the emphasis on demand side. And that is a new, I think, very exciting resource that we are going to be looking to grow. As you all know, it's going to take a few years to really get it ramped up and there are lots of different components of that.

And so, I wanted to just-- I was going to ask along the lines of that community engagement. Cause I think particularly on demand side issues and where we're focused on reliability, that sort of bottom up reliability that you know elevates through the distribution grid up into the bulk power system, that

community engagement and that sort of nuance across our big diverse state is going to be particularly critical.

And so just really excited to actually be investing in that. And encourage as you said, David, encourage the building of bridges across our various initiatives with state funding, with federal funding, where we're going to be investing in communities, and really building local CBO capacity and leveraging those local skills that this overlay can sort of really work seamlessly with that. So really there's so many-- you know this is a multi-cylinder engine and it seems to be, I guess that's a passe metaphor, but it's all firing on all cylinders at the moment.

And then finally, I just want to again highlight you know, you, David, for all your efforts. And just note that David is coming to us from the Pacific Northwest where he is at the Weed Fire Resilience meeting. So, thanks for holding down the board on that topic as well. So, thanks a lot David, for your presence of mind and your sort of maturity in guiding a lot of these initiatives.

CHAIR HOCHSCHILD: Great, well thank you everybody. I'd welcome a motion on Item 8 from the Vice Chair

VICE CHAIR GUNDA: Move Item 8.

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

COMMISSIONER MCALLISTER: Second, Item 8?

CHAIR HOCHSCHILD: All in favor say aye. Vice Chair Gunda?

VICE CHAIR GUNDA: Aye.

CHAIR HOCHSCHILD: Commissioner McAllister?

COMMISSIONER MCALLISTER: Aye

CHAIR HOCHSCHILD: Commissioner Gallardo?

COMMISSIONER GALLARDO: Aye.

CHAIR HOCHSCHILD: Commissioner Monahan?

COMMISSIONER MONAHAN: Aye.

CHAIR HOCHSCHILD: And I vote aye as well. Item 8 passes unanimously will turn now to Item 9, Diablo Canyon power plant extension analysis of need to support reliability.

MR. ERNE: Thank you very much, Chair. And I do want to say thank you for the compliments in the last session. But actually it is made much easier from such great leadership from all of you. So, thank you very much for all of that to make these processes easier and to work on particularly something like the Diablo Canyon Power Plant, which I'll be talking about next. This is our next SB 846 requirement, which is to develop an analysis of Diablo Canyon power plant extension and

whether it is needed to support reliability.

Next slide.

We actually have two requirements in SB 846 relative to Diablo Canyon. This is the first one. It is to look at supply and demand between 2024 and 2030 to look for potential reliability deficiencies if Diablo Canyon is not extended, and to make a determination of whether it should be extended to ensure reliability, it's prudent to ensure reliability. This is our first one.

Our second one is going to be another analysis that we'll be conducting between now and the end of September, actually probably the end of August because we want to try to get it to CPUC for their process. But in that one, we are to compare the cost of extending the Diablo Canyon plant versus an alternative portfolio of resources. So that's the next step in our process of looking at the Diablo Canyon situation.

And then as I mentioned, CPUC has a proceeding going on relative to Diablo Canyon and they'll be making a decision by the end of this year how long to extend Diablo Canyon. So, this is one in multiple steps that the state is going through in this process of looking at Diablo Canyon.

So, I'll be going through the analysis we did

for reliability. This is based on the same reliability and analysis that we did and provided to the legislature earlier this month, which was also part of SB 846, but also AB 205, to look at reliability between now and 2032. So, you'll see some numbers from graphs in here that I've got to 2032 instead of 2030 because we use that same analysis for our discussion here. And so, all of this is coming together for us to make this conclusion.

So, we'll go to the next slide.

Let me first talk about demand and where we are with demand in the state. So, as you can see, each vintage of our demand forecast is showing that demand is going up and up every single year. And that frankly, this is going up more fast every time we do our analysis and it is generally being driven by electrification. So, demand is going up primarily from these activities that we're looking at for improving or reducing our greenhouse gas emissions. In addition, we are seeing changes in the way that we're envisioning or of the way we see demand due to climate change.

So next slide.

Climate change is causing greater weather variability. So, we've seen last year with our extreme heat where we saw records broken across the state, as

well as in 2020 when we saw the rolling outages. We've seen more and more of these heat events happen and we've all experienced that. We've all felt it. Typically, when we look at weather variability in our planning processes, we've looked at averaging out that weather, those weather conditions over a 30-year time horizon.

But we're all knowing that from our own experiences that what happened 30 years ago is not the kind of weather patterns that we're seeing today. And if we take a look at truncating that average to the last 20 years is illustrative of showing you even more about what the impact of that weather variability has been recently. What has happened when we do that, is we don't see too much of a change from year to year on the normal peaks. Slightly increasing over time, but our normal peaks are not the outlier.

What's happening is we're getting more extreme peaks, and those peaks are hotter than we've seen in the past, and the heat events are lasting longer. So greater heat, greater extreme heat events and longer heat events. Which of course is a substantial issue for our grid reliability because we don't plan for those really, really-- we don't buy for those really extreme events, we buy for average peaks.

If we look at last September, September 6th

when we had all those records broken around the state, and we looked at that based on a 30-year weather history, that would be a one in 27 year event. If we look at it from a 20-year perspective, that's only a in 14. So, you can see how this climate change is affecting our weather variability, which is affecting our demand. So not only is the demand going up on average, but also, we're seeing peaks that are happening that are higher from these extremes and they're operating longer. So that's our demand situation. Let me take a look at the supply situation.

Next slide.

So, I'm going to go through a series of charts. This can be a little bit of an iChart to go through some of this and I'm going to walk through it individually because they're a little bit complicated graphs. So, I'll walk through one slowly and then I'll put out the other ones. But I'm going to show you what our resource builds need to be to meet our current procurement orders from the CPUC and their preferred system plan.

So, if you advance one more.

So, we'll take a look at solar first, and that first one shows you-- the red shows you what CPUC's current procurement order is, which is out to 2028.

This is the amount that needs to be built out to meet our resource adequacy requirements.

Next-- advance it one more.

This is their preferred system plan which goes out much further and is higher overall. So, we compared this, the need that's been identified for P-- by PUC, to what would be an average solar build rate in the CalISO territory. And we looked back to 2011.

And if we advance one more.

This shows you what an average solar build rate would look like. Under the average solar build rate, we would not be able to meet the CPUC procurement order, much less the preferred system plan. We also then looked at what if we took the maximum. So, if we had a sustained maximum build, what would that look like?

So, if we advance once more.

This blue line shows you if we had maximum build out of solar, the max that we've seen since 2011 and continued that forward, we would just be meeting essentially the need under the procurement orders up to about 2027-- or 2025, and then we would start exceeding it. But we would not meet 2020-- we would not meet the PSP until about 2026, right? So that's the maximum solar that we've seen since 2011.

Now let's-- I'll do-- advance one more and I'll show you the rest of the resources and I'll talk through those quickly.

But the most important of those is battery. So, we're relying on batteries more and more, and they provided much more value than we could ever imagine. And we've seen that over the last few years during these extreme net peaks where the batteries have kicked in during the net peak and provided some substantial value during those periods. And we have more of those that were being put online and ordered but from the CPUC procurement. And you can see that with an average build rate for batteries that we've seen over the past, we would never even get close to what we need to for the CPUC procurement of the preferred system plan.

And if we look at the maximum, we still don't get close to the procurement order until almost 2027. So, we have a substantial issue with the need to have unprecedented build. So, we've had unprecedented so far, we need to exceed that and have even more unprecedented build moving forward in order to meet what's being called for by the CPUC's procurement orders and their preferred system plan.

Less of an issue with geothermal and wind. But you can see those are much lower in terms of the--

look at the Y-axis, much smaller scale and really the solar and storage is what we're relying on and those are the ones that are critical. And as I mentioned before, what are some of the challenges we see with that build? Not just getting them online and excuse me, not just getting the equipment from the supply chain but also the interconnection and permitting to get those online very quickly. And we've seen unprecedented build so far in the last few years, we're going to need even more. So that's our supply overview.

Let me take you now to the next slide, which looks at a combination of that supply and demand.

So, this is utilizing our modified stack analysis to look at what the conditions look like if we compare supply and demand between now and 2030, and whether we would have a surplus or a deficiency of resources over that time period. To do this analysis, we actually did multiple scenarios. We looked at different levels of delay in getting projects online: no delay whatsoever, a 20 percent delay year over year, and a 40 percent delay year over year. So, seeing some different implications of not meeting the needs.

And then we also looked at an extreme situation. What if we had an extreme event like the wildfire that affected-- the Bootleg wildfire in

southern Oregon that made us lose 4,000 megawatts of import capacity? What would happen for our reliability situation if we had one of those kinds of extreme events?

So, this first one shows you, with no projected delay between now and 2030, the resources that CPUC have has required will make us meet our reliability planning standard with what we have online, assuming that all of that is built. By the way, this does not include the 4,000 megawatts that was just authorized by the PUC a few weeks ago.

Now if we look at-- advance once more.

That was no delay. Next one is 20 percent delay. Not much change, still looking good. 40 percent delay, we can advance once more, still all looking good. Now if we look at one of those extreme situations where we add a wildfire implication, that's the next one. You can see only at that point do we get to a point of a shortfall between now and 2030 with-- if you could advance once more-- with the retirement of Diablo Canyon.

So, this takes into account Diablo Canyon retiring. And our reliability, assuming we can build out all those resources, we would be fine under our planning standard, but we would be at a shortfall if we

had something like a wildfire affecting our transmission lines.

We also did an analysis for comparing this to an event like the 2020 event where we had outages, which is the next slide. In this case, now you see there are situations where we have more shortfalls. So other than 2024, maybe 2025 and 2028, we have shortfalls in each year with Diablo Canyon retiring and meeting our reliability needs if we have an extreme event like we had in 2020.

We also looked at last year, which is even a worse situation. And that's the next slide. Which of course now you can see under no situation would we be able to meet our grid needs if Diablo Canyon was retired. We do have the strategic reliability reserve which does provide resources in these events. Those resources would not be enough to cover a situation, for example, when we have a coincident event with a wildfire.

Next slide.

So, the overall conclusion we have is we can meet our planning standards between now and 2030 with the retirement of Diablo Canyon, assuming that we can build those resources in time and have them available as we need them year over year. However, uncertainties

exist. Those uncertainties are we need an unprecedented build rate, particularly of storage, between now and 2030 in order to be able to meet those needs that we have identified just for our planning standards, not even including emergencies.

But we also have climate change causing greater weather variability, more extremes, more like 2020s, more like 2022, more wildfire related issues. So as a result, we feel that there are substantial risks to reliability with those conditions in place and that having Diablo Canyon online between now and 2030 would make sense, would be prudent to have as an additional resource given that we are concerned that those resources could come online as rapidly as are needed.

Next slide.

Also, if we look at Diablo Canyon and keeping Diablo Canyon online, it is a low carbon resource. If it were not online, we'd be relying more on fossil resources, meaning more emissions that we would have if we had that-- if we were taking it offline. So, it also provides a carbon benefit between now and 2030 by having it online.

Next slide.

So, in conclusion, we're requesting that you approve the proposed resolution adopting the report and

the report's determination that it's prudent to pursue the extension of Diablo, of the operation of Diablo Canyon Power Plant. With that, I'll conclude my comments and open up to questions.

CHAIR HOCHSCHILD: Thanks so much, David. We'll go to public comment on Item 9.

MS. BADIE: Thank you. This is Mona Badie, the Public Advisor. The Commission now welcomes public comment on Item 9. If you are on zoom, please use the raise-hand feature by clicking on the open palm to notify us you want to make a comment. And if you're joining by phone, please press star-nine to raise your hand. Comments will be limited to two minutes per speaker and one speaker per entity.

And now going to our raised hands, we have one raised hand, call-in user one. I will open your line. Please spell your name for the record and state any affiliation. You may make your comment.

MR. UHLER: Hello Commissioners, it's Steve Uhler. The slideshow you just watched has-- I only have 11 slides, so somebody put the wrong presentation in the docket. Let's look at Diablo Canyon. It's a couple of-- slightly more than one gigawatt power plant, two of them. And it has a power factor. Here comes power factor again, very important. It's 0.9.

Now EIA doesn't tell me if it's leading or lagging, which os-- can be critical. And its plant code is 6099. So, it has me wondering, you know, I guess if you can't put solar on the roofs of the houses and stuff because you can't do interconnects and do all these solar interconnects, there's probably plenty of space for Diablo.

And if you have Diablo, there's probably not very much market for that solar because you know, in the duck chart it would be nice if you were to color diablo's output so that you could see it's basically a two-gigawatt plant. Can't flex, no flexibility. Duck chart required flexibility. So that's a bit of a problem in looking at this.

And then also, let's see, what else do I got here for you? Wow, I'm looking at the time. I'm wa-- and you know, Chair, I really have to ask why you found necessity to limit my comment here to two minutes? And how you're going to comply with 11125.7 for the rest of the agenda items. But you can tell us about that in the next item.

I'm really disappointed. There is-- shoot, we've got-- it's one o'clock, you got two and a half hours left over, and you didn't allow us to talk very long. You didn't allow me to defend my petition. But

hey, the government's already technic-- government co--

MS. RAITT: Thank you for your comment. That is our only raised hands. Back to you, Chair.

CHAIR HOCHSCHILD: Okay, thanks. And I appreciate, again, all the hard work on putting that together. Let's go to Commissioner discussion starting with Vice Chair Gunda.

VICE CHAIR GUNDA: Thank you, Chair, and thank you, David, for the presentation. I have a few things that I just wanted to elevate as a part of this. You know, Diablo extension or the proposition to extend Diablo last year. You know, met with kind of a mixed response from a variety of stakeholders on a variety of issues that I want to elevate. Three specific elements that came out of the discussion, and you know, the CEC's specific role and how this recommendation fits that role.

So, 30,000-foot level, I think you know we've gotten at least three broad areas of kind of conversation last year, which is: one, you know, what does that mean to let go of resources during this extraordinary time where we don't really know how our resource planning and the resources that we have, not just in California but in the west has the ability to help with these extreme events. Right? So that's a big

broad question on do we have enough capacity energy on the system? And to Mr. Uhler's point, you know, our ability to dispatch the resources when we need it.

And I want to point out that even though Diablo is a firm resource, by having 2,000 megawatts of firm resources frees up existing dispatchable resources for us to be able to flex up and down. So, it's an important point for consideration. So that's kind of like one element. Right? So, do we have enough energy? Do we have enough capacity? And can we benefit from Diablo as a resource to overcome the potential shortfalls? And I think, you know, much of our presentation today is that.

The second one was around safety. It was a big concern. You know, that's not the task of CEC in the 846 legislation. Our job is to elevate the shortfalls and the system's ability to keep the lights on. But there is an independent body that the 846 calls for to continue the safety discussion.

And finally, I think you know there was, you know, rightfully so some strong push back on, you know, agreed upon the Diablo closure, and the joint party negotiation, and how there was a joint party resolution, and moving away from that resolution was something of an issue. And I think, you know, it's prudent not just for

the state but between any two parties when we negotiate it's important to honor you know the past agreements. And when things change, you know, how do we put the new proposition on in a thoughtful manner to move forward together?

So, I think there are multiple pieces and I want to call the attention that CEC's specific role is in establishing the shortfalls. And that's what we are voting on today. It-- does the shortfalls that we see and anticipate makes this determination of prudency in not just extending. The other way of thinking about it is like, are we ready to close resources when we don't have enough resources online? So, I think that's an important element.

So, second, I want to just call out, you know we forget the extraordinary moments that we go through when we kind of skate through them. Right? So, 2020 was just two and a half years ago when we did not skate through. We had lights, lights go off in California.

In 2021, we were really close when the Bootleg fire happened. I remember literally sweating it as I was falling the CAISO chart, you know losing 4,000 megawatts of resources in a minute. And then how do you shore up the resources?

And 2022, as David mentioned, was

extraordinary. And I just want to like make sure we kind of, you know, put kind of a finer point on this. Our departure from the median forecast was 7,000 megawatts. That's two LADWP's. That's nearing Oregon's, the state of Oregon's, peak load. That's kind of how much we departed. And we are talking about keeping the lights on during those times, and I think it's extremely important we think about that from purely you know, the problem we see at that level.

Two, I think you know we are all working really well. The agencies are working really hard to bring in a lot of resources to bear. But couple of elements. First, we should improve our situational awareness and characterization of reliability challenges. And I think David did an excellent job on talking about that.

And it's important for you all to note that we are talking about reliability challenges in three broad buckets. One, are we procuring enough? Is the CPUC and CEC and CAISO doing the planning activities necessary to authorize enough procurement? Two, are we building it fast enough? And three, regardless of building them, we are still planning to these standards that are quickly becoming obsolete. You know, which are one in 10 planning regime of one in 10 loss of load expectation.

What are you going to do beyond that when we see these extraordinary events?

So I think we framed them over the last couple of years in those three buckets and we are talking about this in that totality. So, the other part I want to make sure I elevate here is when David mentioned-- he showed three specific charts and one was under the existing planning standards. When we talk about existing planning standards, we are talking about a 17 percent PRM. Right? That's the planning reserve margin. Now very quickly that planning reserve margin is becoming difficult to match the one in 10 planning regime right there.

So historically what we did was a one in 10 loss of load expectation roughly translates to a 15 percent PRM, right? Planning reserve margin. And it's easy for us to do resource adequacy along those lines. With the resource mixes that are changing and continues to evolve, that one in 10 planning regime doesn't necessarily nicely translate to a 15 percent PRM.

Even though CPUC is taking extraordinary steps in you know, creating more and more cushion, 16, 17 percent, you know, the jury is still out on whether that's enough. Right? So, it's important for us to consider the analysis in the lens of a 2020 event or a

2022 event that David mentioned. So those are some high-level pieces I wanted to elevate for you all.

And in summary, I mean from my perspective as I work with David closely and a number of colleagues from other agencies, you know as we confront a rapidly changing climate, extraordinary heat events and a record energy demand are becoming very common. And it's probably some of that could go into the planning assumptions, but some of that might not ever be captured because we are moving away so quickly.

The state needs to keep all the options open on the table as we consider, you know, ensuring that we safeguard the transition to protect public health and safety. You know, that's where maintaining the kind of path of extending Diablo comes into place. And an extension would allow more of those additional clean energy resources to come online and hopefully obviates the need for Diablo if that's where the state wants to go.

And it's important to just consider that if the lights go off, the entire climate agenda of California, which so broadly relies on electrification, will be at jeopardy. And I think that's important to continue to think through those lanes.

So, with all that said, I look forward to

supporting the resolution and also want to give a big, big kudos to David, Kristen, elevate a few other people, Mark Kootstra, Chi Hong, Hannah, Liz and Ben, and our colleagues from CPUC, Luong (Phonetic), Itskala (Phonetic), Nathan Barcic and his IRP(Phonetic) team for the incredible work on the Joint Agency Report, which also informed this work. So, with that, thank you so much and back to you Chair.

CHAIR HOCHSCHILD: Great, thank you Vice Chair. Other comments from Commissioners?

COMMISSIONER MONAHAN: Well I just--

CHAIR HOCHSCHILD: Yes, please.

COMMISSIONER MONAHAN: I just want to say, and I told David this in an email, just that I found this report really clear and compelling. And it kind of shows to me what you can do in a short report, which often takes a lot more work and thought than a long report. This one was short, and it really did I feel like walk through why you're making the recommendation you're making.

And I found figures six and figure seven so compelling. It was basically the 2020 equivalent event with project delay assumptions built in, and a fire risk built in compared to the 2022 equivalent event and what energy shortfall we could expect. And it was just

really powerful. So, I found, you know, this just a very well written report. And just give again, David, you and the team, just a lot of appreciation for the hard work that went into it and the clarity with which you were able to communicate the challenge that we face.

And Vice Chair Gunda, I thought it was really helpful for you too when you walk through, like this is-- we are not making a determination about safety. Our charge here is just very clear. And so, I think that it's really important as we struggle through all the issues around what does it mean to maintain a reliable, safe, affordable energy system. This is just one piece and there are other pieces that other agencies have to be involved with that are critical too.

CHAIR HOCHSCHILD: Yeah, well said. Well, I think you said everything I could possibly think of. Are there Commission--

COMMISSIONER MCALLISTER: Yeah.

CHAIR HOCHSCHILD: Commission McAllister, please.

COMMISSIONER MCALLISTER: Yeah, I just wanted to you know, mention-- so, thanks David for-- agree, really well done report. And just really excellent visuals, you know they're simple and as you walk through them, easy to understand and I think communicate

externally really, really clearly. And that you know this decision isn't trying to fix all problems for all people. It's trying to you know sort of satisfy a particular sort of bridging function, that you know there's enough uncertainty over the next 5, 6, 7 years. We need that flexibility, that diversity of resources that we can use.

Also, you know my understanding is that the PUC's procurement, sort of you know, the sort of consideration of the status quo sort of stops, and then you're projecting forward with what we know. And then you know as the situation changes the PUC will have tools in the toolbox and could make new procurement orders. And kind of -- so, it's not necessarily a static analysis you know for the rest of the decade or for the next few years, but it is kind of a snapshot of where we think we are now and the information we have to make a decision. So just-- we want to confirm that. That you know there are-- the situation will continue to morph, and we do have other tools in the toolbox. Maybe that's for David or Vice Chair Gunda.

VICE CHAIR GUNDA: Yeah, I think—

CHAIR HOCHSCHILD: Is there any comment?

VICE CHAIR GUNDA: Yeah, just wanted to one point I think to David's comments earlier. So, we have

this determination, and then we are going to have the September report where we're talking about options. And then there is the safety conversation that all gets submitted to PUC. And PUC then has this opportunity to determine how long to actually extend and continue to look at that. And Commissioner Douglas now is going to be leading that effort and we will closely collaborate on providing her that information.

COMMISSIONER MCALLISTER: Great. Great. Thanks for that. Yeah, well done.

MR. ERNE: Only other response I was going to have Commissioner is yes, we have the tool in the toolbox to order more and that's valuable, but ordering more doesn't necessarily mean you can build more. And so there's still a risk in terms of the build even if you order more.

COMMISSIONER MCALLISTER: Yeah, totally appreciate that. Thanks.

VICE CHAIR GUNDA: And I think the kind of struggle we had in this public conversations was you know the recommendation on applying a certain percent of delay. Right?

I mean you can apply 20 percent delay for 2,000. At 50,000 we applied two percent or 20 percent, it doesn't translate. So, we at some point we will peak

out on how much we can actually build, and then all the constraints that Commissioner Monahan is going to look at in the IEPR on why are we not able to build fast enough? And how much can we build? And what does it take to build? So.

COMMISSIONER MCALLISTER: Yeah, it'd be really interesting to see you know, three, five years from now where we are and revisit this decision and see what the runway then looks like.

VICE CHAIR GUNDA: And I think, Commissioner to your point, the optimism of you know, the extension through 2030 and whatever the legislature decides. You know, if they would like to intervene again, you know our charter first of all is not that. But then the optimism for me is that by the time we get into 2030-- one, we will have an opportunity to dig ourselves out of this changing paradigm because once you actually meet the requirements in terms of demand, the annual increase of demand is not going to be that high.

And then the other opportunity is really the V2G, right? And the VGI opportunity of like, you know, 60 gigs on the wheels by 2030, and how are you bringing- - going to bring that to the table, and then that'll change that conversation significantly.

COMMISSIONER MCALLISTER: So, getting to the

other side with those new tools is really going to be critical.

VICE CHAIR GUNDA: Yeah.

COMMISSIONER MCALLISTER: Great. Well thanks for that.

CHAIR HOCHSCHILD: Yeah, I would just-- I think that's a great observation to end on, that a lot of the load we're adding could ultimately go both ways when it's vehicles and can flex, because we're adding load that’s you know with smart capabilities

COMMISSIONER MCALLISTER: And buildings.

CHAIR HOCHSCHILD: Yeah, yeah. So anyway, unless there is additional public comment or additional Commissioner discussion, I would welcome a motion on this item from the Vice Chair. Item 9?

VICE CHAIR GUNDA: Move Item 9.

CHAIR HOCHSCHILD: Commissioner McAllister, are you willing to Second Item 9?

COMMISSIONER MCALLISTER: Second, Item 9.

CHAIR HOCHSCHILD: All in favor say aye. Vice Chair Gunda?

VICE CHAIR GUNDA: Aye.

CHAIR HOCHSCHILD: Commissioner McAllister?

COMMISSIONER MCALLISTER: Aye.

CHAIR HOCHSCHILD: Commissioner Monahan?

COMMISSIONER MONAHAN: Aye.

CHAIR HOCHSCHILD: Commissioner Gallardo?

COMMISSIONER GALLARDO: Aye.

CHAIR HOCHSCHILD: And I vote aye as well. We'll turn now to Item 10, Commissioner Presiding Member Reports. Let's see, why don't we begin with—how about Commissioner Gallardo.

COMMISSIONER GALLARDO: Thank you, Chair. Mine will be quick. I was actually sick the last few weeks, so just been focused on trying to recuperate and you know, set up the fundamentals of my office and wanted to give a big thank you to my assistant, Holly, and my interim advisor, Andrea, for putting up with me being patient and just being diligent on their end and proactive on helping me out. So, I'll leave it there for now. Turning back to you, Chair.

CHAIR HOCHSCHILD: Okay. How about Commissioner McAllister?

COMMISSIONER MCALLISTER: Yeah, just quickly wanted to just say we're really looking forward to the Tribal En Banc. I think you know we're all headed up there over the next day or so, and I think that's really going to be monumental and just a terrific activity for us to focus on this in a way that's all together and really build a dialogue and build the nexus of

conversation that we need to really elevate tribal issues going forward. So, thanks Noemi and Katrina and all the folks, Mona, all of those who've been putting this together since-- there's a huge spreadsheet of logistics that's quite impressive. So, I'm looking forward to that.

Wanted to just also mention a visit that the Chair and I made a few days ago to Blue Planet, which is doing a really interesting proof of-- it's more than proof of concepts, it's actually a pilot, a plant that is actually taking carbon dioxide from a power plant and capturing it and putting it into aggregate to use in concrete. And in fact is using as its prime material recycled concrete and extracting the aggregate and the limestone and all materials from that as its feedstock to make a new concrete and new aggregate. So, it's actually quite impressive and has a potential to go seriously carbon negative in terms of its carbon footprint.

And as you all know, cement is-- concrete and cement are two of the-- that overall ecosystem is one of the most problematic and largest sectors of our economy, you know not just in California but globally. It's the most carbon intensive building material and it's just fundamental to our built environment. And so, solutions

there are just really needed and there's a lot of innovation going on in that sector and I'm just really excited to see that whole kind of life cycle approach to how we do cement in our-- do concrete, rather, in our economy. So had a nice group of staff along with us and that was an excellent trip.

And then finally just want to give kudos to all of the staff and RETI and efficiency division working on the Equitable Building Decarb Program, you know relatively complex large program, and really beginning to make serious progress on developing the program structure. And working to bring in some, not just sort of guide, provide feedback into the federal-- the IRA discussion so that we try to get that money aligned with our state funding for building decarb, but also getting some competitive monies that can come in and help us compliment those formula resources.

And in particular, you know the staff in the Compliance Unit is working on a couple of competitive solicitations to DOE to improve compliance. And, have gotten the go ahead to go on from the base proposal to the full proposal which will be due here at the end of the month. So, Daniel Wong and Lorraine White and the team in the efficiency division working on that, wanted to just give them kudos. And roll up sleeves and we'll

get the full proposals in and fingers crossed DOE looks favorably on that. But just an example of staff really pulling together and thinking outside the box to go for these opportunities to bring funding to the state to do what needs to be done and you know get our built environment decarbonized in earnest. So, with that I think I'll leave it there.

COMMISSIONER MONAHAN: Okay, Commissioner Monahan.

COMMISSIONER MONAHAN: Well, I went with the Chair to Stanford together with some of our Stanford grads, Jonah and Terra Weeks, but I'll leave that to you Chair and that's-- since you were the one that organized that. But it was great to see the partnership that we have and the partnership that we-- deepening partnership that we could have with Stanford and its graduates.

So, I also wanted to emphasize actually that day, there was an event as the Chair and I were commuting together, that Tesla has named its engineering headquarters in Palo Alto. And you all may recall there was a lot of drama when the headquarters of Tesla was moved to Texas. So, at this event the governor came, there was really, it was really interesting to hear, if you want to check it out online that the governor talking with Elon Musk.

And one of the things that Elon Musk said, which I want to verify, but he said that the Fremont facility is the most productive EV manufacturing facility, not EV-- vehicle manufacturing facility in the United States. So, I actually want to fact check that one because that's a pretty powerful statement if it is indeed true. I think you all know there's over 20,000 employees at that factory and it's just really, you know, heartening that California, the sort of the policy environment we have in terms of really promoting a zero emission vehicle future, having the most productive vehicle manufacturer in the country located here is just a powerful thing. And I think it cements some of the work that we're doing in supporting EV manufacturers, ZEV manufacturers here in California.

I also wanted to share that Ben Wender and I met with a company, kind of following the footsteps of Commissioner McAllister around an interesting company. It's called B2U, or Battery Second Use. And it's the, as far as I know, the only company that's using used EV batteries to provide storage to the grid.

So, it's located in Lancaster. It has 25 megawatt hours of storage capacity made up of 1300 batteries, mostly from Nissan Leafs but also from Honda vehicles. And it's selling into the wholesale market.

It earned over a million dollars last year according to the president of the company.

And we talked to them about the fact-- we asked them, well, do you have any other plans to do this? And he said, yeah, we're trying to expand. We could by the second half of the summer, we could have 12 megawatt hours of another facility using EV battery. So I just wanted to share everyone in terms of-- there is this potential market for used EV batteries to provide storage before they're recycled.

And one of the pressures that he talked to us about is the fact that because of the Inflation Reduction Act, there's a lot of pressure to reuse-- to recycle the minerals and lithium and other cobalt and other precious metals from batteries. And that may affect the second life potential for these batteries because they're going to become more valuable just to be used as a domestic source of minerals. So, some of the unintended consequences I would think of some of the policies that we have which may in disincentivize second use. And I think it's just something for us to be cognizant of. And that's all. Pass it to you, Chair.

CHAIR HOCHSCHILD: Okay. Vice Chair Gunda?

VICE CHAIR GUNDA: Yeah, thank you, Chair. It's been a couple of weeks now since the last business

meeting and it's always something's happening. So, I just want to note that I was able to go up to Eureka to attend the annual crab feed of the Operating Engineers District 40. It was just an amazing opportunity to be up there and continue to develop relationships with the community up there on offshore wind issues.

And Kat from your office, from Chair's office joined, and it was a really good meeting and an exposure for me. One thing that was the first time I tied crab, I never ate crab before, so it was great. But I thought crab feed meant we were going to feed the crab. So, I took my children up there promising that we are going to feed the crab and it did not turn out well. So I think- - so that that's on that issue.

With second, we did go into-- last week we had a legislative hearing on the governor's gas penalty proposal. So, CEC was kind of supported the administration's proposal and we testified there too, at the information hearing on sharing what the governor's proposal is and the CEC's continued work. And for all of you, I think it's important to note that the governor's proposal has two elements. One is the penalty on the refinery margins, but there's also another big elements that will become CEC-centric, which is the improving transparency of the petroleum industry,

including data gathering and essentially an SB 100 equivalent study on petroleum and fuel transition. So just sharing that that's a great opportunity for all of us to think about how to both incorporate equity and its implications, but also the transportation climate policy as a whole.

And you know, along those lines, we are, Chair and I are actively interacting with the petroleum industry. We have a Chevron refinery tour coming up next week and the Martinez, the biofuels trip that's coming up as well. So, we are actively engaging on all elements there.

Had a chance to meet with SMUD's leadership last week, which was extremely beneficial. I think SMUD provides a unique opportunity in working with the POU on the DEBA setup and the DSGS monies, and to really test out some unique opportunities, whether it's vehicle to grid integration, virtual power plants. So you know just add good discussions on encouraging SMUD to also continue to apply for some of the money we have and showcase some of the opportunities.

And finally, Commissioner McAllister, I thought he was going to talk about this. Commissioner McAllister and I are heading to Portland in a week to attend the Northwest Regional Expansion Summit. Really

an opportunity to meet with colleagues from Oregon, Nevada, broader west, you know, hear from some of the producers and continue the discussion of you know the evolution of the Western market. So those are our stuff. Thank you.

CHAIR HOCHSCHILD: Thank you, Vice Chair. Yeah, just briefly. So yeah, actually the Tesla factory is the most productive car factory in the United States. Over 600,000 vehicles expected to be produced there this year. And it was nice see the R&D facility and headquarters open in Palo Alto.

I did want to just say a word about the Stanford relationship. As many of you recall last year, John Doerr made a billion dollar gift to Stanford to set up a new climate school that's being run by Arun Majundar, who we've worked with for a long time on a bunch of capacities, including having this fellowship with this program with Stanford graduate and undergrads to come work at the Energy Commission and other public agencies on energy. It's been really fruitful. So, I had a great dialogue with them on a bunch of areas of common interests. And thank you Commissioner Monahan and Terra all who joined that day, particularly from the R&D team; Virginia Lew and Johnah Steinbuck and others.

I also wanted to share, I did a visit on

Friday with Hannon Rasool down to BYD; their electric bus factory, which is in Lancaster 550,000 square feet. They're looking at opening another facility later this year to make up to 4,000 electric school buses a year there, and are designing them all to be V2G. So that the typical duty cycle for an electric school bus is usually 50 miles or less, and they would build it with 150-mile capacity and then be able to provide ancillary services to the grid. So, really interesting discussion. And Vice Chair, I'll follow up with you on the summary of the reliability elements of that. So that was terrific.

And then I just also wanted to note that today is the opening of the very first Tesla superchargers that are open to the public. So, there are two chargers that were opened just today and announced, and I think one's in Placerville and I can't remember where the other one was. But you know that that's really a walled garden turning into a public park, and we want to make as much fast charging capability available to all vehicles as we can. It's going to be really helpful to accelerate deployment and adoption of electric vehicles and a really core part of our strategy.

I will stop there and just say I'm going to be looking forward to this En Banc. And with that we'll

turn to Item 11, Executive Director's report.

MR. ERNE: Thank you Chair, Commissioners. Just one thing to report, which is March is a budget season this year, as it always is. So, over the coming weeks we will be testifying before the Senate and the Assembly on our budget items. And I will keep you posted. I will be joined by our directors to help out as questions come from the legislature.

CHAIR HOCHSCHILD: Yep. Great. We'll go to Item 12, Public Advisor's report.

MS. BADIE: No report from me. Thank you.

CHAIR HOCHSCHILD: Item 13, Chief Council's report.

MS. BARRERA: No report from the Chief Council's office. Thank you.

CHAIR HOCHSCHILD: Okay, we're adjourned. Thanks everybody.

VICE CHAIR GUNDA: Thank you, all.

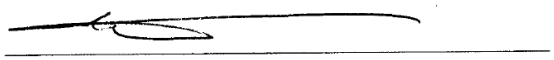
(Whereupon the meeting was adjourned at 1:21 p.m.

REPORTER'S CERTIFICATE

I do hereby certify that the testimony in the foregoing hearing was taken at the time and place therein stated; that the testimony of said witnesses were reported by me, a certified electronic court reporter and a disinterested person, and was under my supervision thereafter transcribed into typewriting.

And I further certify that I am not of counsel or attorney for either or any of the parties to said hearing nor in any way interested in the outcome of the cause named in said caption.

IN WITNESS WHEREOF, I have hereunto set my hand this 14th day of March, 2023.



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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 14th day of March, 2023.

Myra Severtson
Certified Transcriber
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