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STATE OF CALIFORNIA

CALIFORNIA ENERGY COMMISSION

In the matter of:

Clean Energy System Reliability) Docket No. 21-ESR-01

LEAD COMMISSIONER WORKSHOP ON CLEAN ENERGY

ALTERNATIVES FOR RELIABILITY

SESSION 1

IN PERSON AND REMOTE VIA ZOOM VIRTUAL MEETING

Warren-Alquist State Energy
Rosenfeld Hearing Room (Hearing Room A)
1516 9th Street,
Sacramento, CA 95814
(Wheelchair Accessible)

FRIDAY, OCTOBER 28, 2022

10:00 A.M.

Reported by:

Martha Nelson

APPEARANCES

CEC Commissioners Present

Siva Gunda, Vice Chair, CEC

Patty Monahan, Commissioner, CEC

Andrew McAllister, Commissioner, CEC

Kourtney Vaccaro, Commissioner, CEC

CEC Staff

David Erne, Deputy Director, Energy Assessments Division, CEC

Lisa DeCarlo, Attorney, Chief Counsel's Office, CEC

Chie Hong Yee Yang, CEC

Brian Samuelson, CEC

California Public Utilities Commission (CPUC)

Alice Reynolds, President

Darcie Houck, Commissioner

Pete Skala, Director Electricity Supply, Planning, and Cost

California Independent System Operator (CAISO)

Neil Millar, Vice President, Infrastructure and Operations Planning

California Department of Water Resources (DWR)

Ted Craddock, Deputy Director

APPEARANCES

Public Comment

Kurt Johnson, Climate Center

Robert Budnitz, Diablo Canyon Independent Safety Committee

Rick Brown, TerraVerde Energy

Kate Unger, California Solar & Storage Association

Steven King, Environment California

Suzanne Harvey, Santa Lucia Chapter, Sierra Club

Patrick Welch, California Municipal Utilities Association

Unidentified Male, Boulder Decarb

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PROCEDINGS

10:03 a.m.

FRIDAY, OCTOBER 28, 2022

MR. ERNE: Good morning, we're just getting settled in the room, but I think we're about ready to start. So thank you for joining our workshop today on Clean Energy Alternatives for Reliability. This will be one of multiple workshops that we'll be having on this topic related to the number of legislative requirements that came to us, to the agencies, over the course of the summer. So this will be our first overview and provide some background on the materials.

Before we start, I want to give some administrative items, cover a few things.

We're going to have two sessions, a morning session and afternoon session. The morning sessions is from 10:00 to 12:00 and that will be a background material, overview of requirements, and a discussion of reliability. And then the afternoon session will be a longer discussion about clean energy alternatives and laying out the supply—and-demand-type alternatives that we should be evaluating for these multiple requirements.

We will have Q&A and public comments throughout the day. And for the for those who are in the room, we'll have people come to the podium for Q&A and public comment.

For those that are on Zoom, please use the question feature in Zoom to provide -- or to ask questions and provide comments. And if you have administrative questions, then use the chat function.

Public comments for this workshop are due on November 10th. And the docket information is presented -- opportunities, I don't think we have the slide u, do we? Bring the slide up.

The docket is our Reliability Docket 21-ESR-01. And we'll also be having, probably producing in the late next week, we'll have an RFI go out which will ask some of the similar questions that we're going to be asking this afternoon on technologies and ways we should evaluate those technologies to meet the various requirements.

The workshop is being recorded and we'll have it posted. The schedule and the presentations already are posted in the docket.

So at this point, I'm going to go through a quick overview of the agenda, which is slide three.

We'll begin with comments from the dais. After that, I'll give an overview of our reliability situation in the state. We'll cover the 2022 legislative requirements for our CEC, CPUC and DWR. And then we'll have Q&A and public comments that will round up the morning.

In the afternoon, we'll have a session, which

will be a longer, more interactive session, talking about the types of supply and demand resources that we should be evaluating for reliability for the state to meet our requirements, and some questions about the development of the Distributed Electricity Backup Assets Program. And again, public comments and Q&A for those. And that will be our agenda for today.

So at this point, I'd like to turn it over to our lead Commissioner, Vice Chair Gunda, who will be giving -- starting opening comments from the dais.

VICE CHAIR GUNDA: Thank you, David.

Good morning, everybody, and welcome to the workshop. We have a number of principals from both agencies and I welcome their comments on the dais once I make a brief introduction on the topline goals of this workshop.

As David just outlined, you know, we have two sessions today to really provide a situation to witness for the public. The whole legislative cycle this year, starting in April, moved really fast. There were a number of bills and funding opportunities that were entrusted to the agencies. So we want to make sure that the public has a good understanding on what the requirements are. So we would like to have some time in the morning for Q&A and comments so one of the key goals is met, which is leave

this workshop with a general understanding of what the requirements are.

And the second session, as David noted, we would want to begin with just bucketing all the requirements into broad buckets of what we see, you know, both from analysis all the way to figuring out recommendations for the funding. So we're going to talk through that and really kind of dig into it a little bit more on what are the options on the table we should consider both for near term and long term reliability and clean energy transition.

So it's going to be an important workshop for us. We look forward to learning from all the public and the stakeholders. With that, I will pass the mic to President Reynolds.

PRESIDENT REYNOLDS: Thank you, Vice Chair Gunda. Really excited to be here. Thank you so much for including the PUC on the dais today.

Welcome to all the members of the public. Really looking forward to the agenda today.

I just wanted to add a couple of points. I think we're going to be hearing more about this later but wanted to make everybody aware that we do have an open proceeding at the Commission, pursuant to SB 846. And we currently have reopened our previous proceeding on Diablo Canyon and we'll be looking at -- we'll be carrying out the statutory

direction for the first phase of the PUC's work through that open proceeding. We expect to wrap it up by the end of this year as directed by the legislature. And it is, essentially, to make the order that is required to PG&E to keep options open for continued operations of the facility and track costs from account and accounting perspective.

So just wanted to note and accentuate the work that we're doing so that it's clear that we're taking our first steps in the context of everything else going on in this workshop.

And I really appreciate the way Vice Chair Gunda, CEC staff, that you're taking this broad perspective and establishing the larger picture so that we can evaluate all of these issues comprehensively.

So thank you very much for hosting today. Thank you to the staff for all the work and putting together this event today. And I look forward to hearing more.

VICE CHAIR GUNDA: Thank you, President Reynolds. With that, I'll begin with the dais here.

Commissioner Houck?

COMMISSIONER HOUCK: I also just wanted to thank the CEC commissioners and staff for holding this important workshop today. I'm looking forward to hearing the presentations, and particularly this afternoon's presentations regarding distributed energy resources and

clean energy options, and how that can help relate and support and coordinate with the work that the CPUC is doing regarding DER.

So thank you. And, again, I'm looking forward to

So thank you. And, again, I'm looking forward to hearing from everyone this morning.

VICE CHAIR GUNDA: Commissioner Neil?

VICE PRESIDENT MILLAR: Thank you very much, Vice Chair Gunda.

Yes, on behalf of the ISO, we really do appreciate the opportunity to participate in today's discussions. The reliability issues being discussed here are obviously critically important to the ISO. We do very much appreciate the excellent collaborative working relationship we have with both Public Utilities Commission and the Energy Commission. And we do see the fairly lengthy list of new study and reporting requirements continuing to build on that relationship. And we'll look forward to going through today's panel discussion, so really appreciate it.

Thank you.

VICE CHAIR GUNDA: Thank you so much, Neil.

Commissioner Monahan, and then Commissioner

23 McAllister.

COMMISSIONER MONAHAN: Thanks. And I just want to express my appreciation to you, Vice Chair Gunda, for

your leadership in this space, and to fostering this interagency collaboration, which I think is really critical to being successful going forward.

I think we're all laser focused on really, how do we ensure reliability while we're also decarbonizing our electricity and transportation sectors in our economy at large, and in trying to ensure that our energy system is affordable, especially for people that are struggling to make their make ends meet?

So just really appreciate the fact that we're having an interagency collaboration. I think that's the only way we'll be successful going forward.

And I'll turn it over to Commissioner McAllister.

COMMISSIONER MCALLISTER: Great. Thank you,

Commissioner Monahan. And second your thanks to Vice Chair

Gunda, and also our colleagues from the other agencies.

Good see Neil and Commissioner Houck there in person. So

thanks, everyone, for all your engagement.

And, yeah, just, I guess, we're doing something, particularly this afternoon, we'll be talking about, as Commissioner Houck said, the distributed resources that we are really trying to take advantage of to help underpin reliability and buttress our entire project, you know, moving to the Clean Energy Transition, achieving 100 percent carbon-free energy systems and good grid,

particularly while we take advantage of resources that really we're trying to do at an unprecedented scale, I think, focusing on the distribute energy resources, both demand side efficiency, load flexibility, and small scale generation. And so we have to be very deliberate about that.

and I really appreciate the interagency engagement and collaboration on this, because we have to sort of look at everything in the clear light of day. And we want these resources to be available in aggregatable and underpin reliability. At the same time, you know, we need we expect to need them to, to perform, you know? And the electrons don't care where the energy is coming from, they just want it, they're going to do what they do. And so we really have to, I think, be cleareyed about this analysis.

At the same time, I am incredibly hopeful that we'll be able to unlock resources that heretofore have not been available at scale, and in particular, from our buildings and transportation sector, so really optimistic. And I think we have the people and the tools at our disposal and we have to use them use them right, correctly, and I think this workshop is a great step instruction.

So looking forward to the to the conversation.

VICE CHAIR GUNDA: Thank you, Commissioner McAllister.

1 We have Commissioner Vaccaro just joined. 2 Commissioner Vaccaro, do you have any opening 3 comments? 4 COMMISSIONER VACCARO: I'll be very brief. Thank 5 you, Vice Chair Gunda. I came in late and stayed off video not to be disruptive. And so in that same vein, I will 6 7 just associate myself with all of the very, I think, 8 thoughtful comments from the leaders on the dais. 9 And I think I would just say that we're dealing 10 with really weighty, important, and complex topics. 11 just really appreciate the leadership to bring this 12 conversation into the public space for folks to understand, 13 to ask questions to engage, I think that's really very important as we move forward. Just want to commend you, 14 15 Vice Chair Gunda, for taking this this important step. 16 VICE CHAIR GUNDA: Thank you, Commissioner 17 Vaccaro. 18 So we have a couple of minutes to close the 19 opening comments from the dais so I can pass it back to 20 David, so just wanted to reiterate a couple of key topics I 21 raised in business meetings right after the summer. 22 So just want to make sure, at least, you know, as 23 a team here on the dais, to really provide a sincere 24 appreciation to hundreds of staff at ECC CPUC, CAISO and

MR. WITHROW: ,R and many other state agencies that worked

25

tirelessly this summer, all the way from April, just working very closely with the stakeholders, to the extent possible. And also, you know, the Governor's Office and, you know, together to make sure, one, we provided all the information we were requested, you know, of the legislature and the Governor's Office, but also just working so hard, their hearts out, to keep the lights on this summer. So just want to provide a sincere gratitude to all the staff.

I also want to thank the stakeholders. We could not have gone gotten through September 6th without the kind of mobilization that happened. And the stakeholder goodwill and commitment to make sure we -- the lights don't go off at the water agencies, the POUs, the IOUs, whether you have large customers, everybody came to the table, state agencies came to the table to just, you know, make sure we worked together and saw every opportunity there and took it.

Just in the light of that, on September 6th, we mentioned this before, as we think through the liability, there is obviously a huge portion on improving our planning and processes. That's absolutely something the agencies take very seriously in working towards that. But also, you know, even as we think about planning and processes and the improvements there, the September 6th, we were on track to reaching a 53,000 megawatt load on the CAISO system. That

was almost 7,000 to 8,000 megawatts higher than what we would have seen on an average September month, so we're talking about two LAWPs on top of the CAISO system.

So that that is not just a deviation from planning or audit process, it is climate change. And we need to really embrace that and make sure that we understand the extraordinary situation we're in and make sure we have all the tools on the table to make this work. And that includes tradeoffs. And we have to talk through tradeoffs on all the different options we need, both from making sure we have reliability in the short term but ensuring that we do not deviate from a clean energy transition, and accelerating the hospital as quickly as we can.

So with that spirit, I welcome comments today, with a spirit of both making sure we understand what the problems are, but to the extent that we have solutions, you know, we would love to hear and work together as one big family.

So with that, back to you, David.

MR. ERNE: Thank you, Vice Chair.

Thank you for the comments from the dais as well.

So I think I neglected to mention, I'm David

24 | Erne. I'm the Deputy Director of the Energy Assessments

25 division. And I'm going to give an overview, kind of our

reliability situation currently in California, to add on to what the Vice Chair just noted. And I want to provide that as stage setting for the subsequent conversation because what you'll see is the reliability challenges we've been seeing over the last few years are really the drivers for the number of requirements that the Governor and legislature set forward for the agencies this summer. And that will follow my overview of the presentation. So my expectation is to give you the overview that helps you understand the requirements that are going to be enumerated after that by each of the agencies.

So first slide -- or next slide.

Let me give you a little bit of perspective on our compounding risk, reliability risk. And really, when we think about planning, historically, planning has been looking at 30-year averages and evaluating our needs for recent resources based on that. And as we've all seen, the last ten years, even the last five years, have been substantially different than in terms of conditions of what we've seen compared to 30 years ago. So we really need to rethink how we evaluate the history and how we think about where we're moving forward.

We saw that, in 2020, when we had the outages, we had extreme heats that were record breaking in the state, which, of course, were subsequently exceeded in September

of this year. We saw some profound increases which led to some rolling outages.

As a result of that the agencies took quite a few actions to help bolster the system to make sure that we did not have that repeat again. CPUC called on and made an unprecedented procurement order to help with that process. We worked at including climate change into our planning, something that has been initiated but is a long way to go to bring us to where we need to be for truly considering climate change more collectively in our planning processes. And we identified some contingency measures or resources that we could call upon that are not part of our typical suite of resources that we could have available to us in the course of an emergency.

But as we've seen in 2021 and 2022, we had compounding issues. We had, again, extreme heat. We had drought that continued, and extreme drought. We had wildfires, particularly we had the Bootleg Fire in Oregon last year which resulted in 3,000 megawatts of transmission that was not available to CAISO.

We also saw, during COVID, and just in general for the types of resources that we're -- clean resources were procuring, supply chain issues being a problem. They were a problem, as I mentioned, because of COVID. But they also continue to be a problem. And those are the problems

for resources that we're relying upon to bring on the system to provide support for retirement of future thermal resources that we currently have online.

All of this drew to the point where the Governor proposed a Strategic Reliability Reserve earlier this year, that reserve was finalized or came to fruition through AB 205, and we'll talk a little more about that detail, and gave authority for DWR and CEC to implement some programs to provide additional resources, and we'll talk about that in a minute.

But as we see, these issues continue to compound, continue to get worse. Prices have gone up. Developers are concerned about the prices and the ability to get new projects online. So we have a lot of work to do to help prepare for those and be able to improve our planning processes to be available for those.

Next slide.

Let me put it in some -- in a different perspective. So I'm going to create a resource stack based on the situation that's that we see ourselves in.

So we have a traditional planning standard, one in ten, that we try to meet. And we procure or we authorize procurement to that planning standard. So for example, that would have happened last year, based on the demand forecasts that we had provided early last year. And

that's a certain number of resources.

Between last year and this year, conditions can change, drought can change, hydro conditions as a result of that can change, economic situations can change, and so therefore, demand can change, other factors can change. So on top of what was authorized previously, you have additional resources that may need to be brought online to cover those changing conditions.

On top of that, as I mentioned, we have some supply chain issues and some delays in projects coming online. And there may be additional resources that need to be available to cover those resources that don't come online when they need to be. We have the extreme heat that's not covered in our one-in-ten planning standards, so that would be additional resources to cover the events like we saw in September. And then we have situations where we have extreme drought or the fire, like I mentioned, the Bootleg Fire, and additional resources to cover those kinds of situations. We don't procure to all of those. We procure to meet our planning standard.

But we have -- if you can go one more?

We have a number of resources that we may need to cover a coincident event. So drought, fire, extreme heat, all of that is not something we normally procure for as we may have some additional resources that we need to cover

that. And, again, part of that was the reason for having the Strategic Reliability Reserve.

Next slide.

Looking at our analysis, CalISO and CEC looked at the beginning of the summer, looked at our situation for the summer, and determined that if we look at the challenges that we had, about 1,700 megawatts additional to cover the difference between what was procured and what was needed and the updated forecast, we could have as many as 600 megawatts of delays and projects. And we could have, as I mentioned, 4,000 to 5,000 megawatts if we have a fire event, like the Bootleg Fire, and other extreme events like additional drought.

So we predicted that we could need as many as 7,000 megawatts this summer. And that could be going up to as many as 10,000 megawatts additional by 2025 to keep the lights on during these coincident events. We've been very fortunate that we've not had coincident events. The fire was individual from other events but we have not seen the situation, but we could see a situation where all of those combine at the same time.

Next slide.

As I mentioned, the agencies looked at some options to provide some contingency resources that we could bring online during those situations where we have the

extreme heat and identified up to about 2,000 megawatts of resources that could be, in the first case, operational, so generally, resources that CalISO can bring online to make those available during an emergency.

We have additional supply-side resources, you'll hear a little bit about DWR as temporary generators, and efficiency improvements at power plants, and demand side.

We're pretty much well aware of the Flex Alert Program, which is valuable. And CPUC set up the Emergency Load Reduction Program, the Demand Side Grid Support Program, which was stood up by CEC this year, which is equivalent to the ELRP Program but for POUs, and a number of other activities, for example, DWR, shifting their pumping loads to help during those emergency situations. And as we saw this summer, voluntary reductions by large users, which made a big difference.

Next slide.

Let me talk a little bit about September 6th. So as the Vice Chair mentioned, we had a really hot day, September 6th, which was part of a multiday heat event from August 31st until September 9th, so many days of extreme heat. September 6th tended to be the worst day of that period. The demand under a normal situation is the gold line on this graph, which is around 44,000 megawatts. And you can see that the heat caused our demand to go much

higher than we ever would have predicted it from an average perspective. And as the Vice Chair mentioned, it could have gone up to as much as 53,000 megawatts. We peaked out at 52,000 megawatts that day.

And looking at that demand, that is equivalent -so normally if we think about an average demand being 1-in2, which is the gold line, what we actually saw was closer
to like 1-in-27 if you consider a 30-year rolling average,
or 1-in-14 if you consider a 20-year average. And that's
important, as I mentioned, because if you consider a
shorter timeframe, you're considering more of those impacts
from climate change than if you look back over a 30-year
period.

We had a number of activities occur. So we had Flex Alerts all those days. We also had a number of resources that came online from the contingencies. We worked very hard to help bring that demand down. And one of the key strategies was the Wireless Emergency Alert that CalOES called. And that, as you can see from the slide — if you keep going, clicking through, there we go — if you see where that wireless alert was, you can see right before that cliff, it made a big difference. So California customers reacted to that Emergency Alert and dropped their loads substantially.

And as the last, the bottom portion, of this

graph shows, you can see why we're in this situation, solar goes down at the time that we need additional resources.

And although we had good performance from storage, and we had some wind increase, it's not enough to compensate. And so we have some challenges during that net peak period from 4:00 to 9:00. So our critical areas that we're always thinking about are that 4:00 to 9:00 timeframe.

Next slide.

As I mentioned earlier, there were a number of actions that were taken by the agencies, in addition to California customers, to help us during that day. The Strategic Reliability Reserve kicked in about 1,600 megawatts of resources. That includes additional generation and imports that DWR was able to provide, as well as support from the Demand Side Grid Support Program. So the resources provided in the Strategic Reserve from legislation the summer already provided value during the September heat event.

We also had our contingency resources that we brought on, as well as other resources. For example, DWR made an extra effort to maximize their hydro and minimize they're pumping during that period to have additional support during that time period.

So those collective actions are really what helped us during that time but we have a lot more to do.

So that sets the stage for where we currently are with our reliability situation.

Now what we're going to do is we're going to turn to a discussion about the requirements that were established by the Governor and legislature this summer to help continue to bolster the grid and provide additional reliability for the system.

We've asked, in addition to CEC, CPUC and DWR to join us because, as you're going to hear, there are a number of requirements from multiple bills, it can be very confusing, it's challenging for us to keep them all straight, I'm sure it's challenging for those who are not working on it day to day to keep it focused, so we're going to go through all those requirements by agency so you can understand what each agency is on -- is working on, but also understand the overlap or the or the interconnectedness of these risk requirements, and understand that all of the agencies are working very closely together to make sure that we meet these requirements and we do it in a in a coordinated fashion.

We're going to have speakers first. Our first speaker is from CEC, Lisa DeCarlo, who's a Senior Attorney. She'll give the CEC requirement overview. Then we're going to move to Pete Skala, who will be giving the overview from the CPUC perspective of all their requirements. And then

finally, we have Ted Craddock, Deputy Director at 1 2 Department of Water Resources, who will be given the DWR 3 overview of requirements. 4 So to that, I'll turn it over to Lisa first, and 5 she'll give the overview, and then we'll just walk through each of the individual speakers. And then we'll Follow 6 7 that with O&A. 8 Thank you, David. MS. DECARLO: 9 Good morning. I am Lisa DeCarlo, Energy Commission Senior Attorney with the Chief Counsel's Office. 10 11 And I will be providing an overview of some of the many 12 programs and responsibilities the legislature has recently 13 tasked the Energy Commission with under the umbrella of 14 clean energy alternatives to -- for reliability. 15 Next slide, please. 16 These are the four key bills we'll be discussing 17 today. 18 Next slide. please. 19 And this gives you a sense of the scope of the 20 programs and requirements relevant to today's discussion. 21 I'll touch on each of these in the slides that follow. 22 Next slide, please. 23 Starting with AB 205, one of its main features 24 was creating the Strategic Reliability Reserve, which was

adopted to ensure electric electricity reliability as the

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state contends with climate change-induced extreme events as it transitions to a clean energy future. Along with providing funds and authority to the Department of Water Resources to purchase or contract for resources to support summer reliability, the Reserve contains three components applicable to CEC: the Demand Side Grid Support Program, or DSGS, the Distributed Electricity Backup Assets Program, or DEBA, and the permitting of DWR Strategic Reliability Reserved facilities. And I'll just discuss each of these three components in a little detail.

DSGS is meant to incentivize dispatchable customer load reduction and backup generation operation as on call emergency supply and load reduction for the state's electrical grid during extreme events. In August, the CEC adopted guidelines to implement the DSGS Program, which proved invaluable, as David mentioned, to meet reliability needs during the early September heat storm. By last count, 315 megawatts were enrolled in the program, and it resulted in a dispatch of 299.7 megawatts on the highest day, September 8th. We are currently evaluating how the program performed and determining if improvements are necessary to optimize the program for next summer.

The DEBA Program is meant to incentivize the construction of cleaner and more efficient distributed energy assets to serve as on-call emergency supply or load

reduction for the state's electrical grid during extreme events. The CEC may allocate monies for efficiency upgrades, maintenance, and capacity additions to existing power generators, and for deployment of new zero or low emission technologies, including fuel cells and energy storage that exists at existing facilities.

We anticipate issuing a request for information next week to, among other things, obtain input on how best to implement this program. And we look forward to engaging with stakeholders in the program's development.

The CEC's permitting authority for DWR facilities begins on October 31st of this year. And we recently adopted emergency regulations to implement this program. The types of facilities that fall under this permitting authority include new emergency and temporary power generators of 5 megawatts or more, new energy storage systems of 10 -- of 20 megawatts or more that are capable of discharging at least two hours and that are located outside the Coastal Zone and the jurisdiction of the San Francisco Bay Conservation and Development Commission, generation facilities using clean zero-emission fuel technology that are located outside the Coastal Zone and the jurisdiction of the San Francisco Bay Conservation and Development Commission.

In order for the CEC to grant a permit, a site

must have been previously disturbed, and have access to the infrastructure and resources needed to operate the proposed facility. The CEC may not certify a site in state, regional, county or city parks, wilderness, scenic or natural reserves, areas for wildlife protection, recreation, historic preservation, natural Preservation Areas in existence since 1974, or estuaries in an essentially natural and undeveloped state.

Next slide, please.

AB 205 also expanded our preexisting authority over thermal power plants 50 megawatts or larger to include, at the election of a developer, the facilities noted here. Under this program, our licenses in lieu of all other state and local permits, with the exception of a few state and regional agencies, including the Public Utilities Commission, State Lands Commission, Coastal Commission, San Francisco Bay Conservation and Development Commission, State Water Resources Control Board, and Regional Water Quality Control Board.

A few weeks ago we adopted emergency regulations to implement this program and have put in place to interagency agreements the statute requires. This program has very robust public comment engagement requirements and mandates the production of an Environmental Impact Report under CEQA, the California Environmental Quality Act, to

evaluate projects impacts.

In order to avail themselves of the streamline permitting process, applicants must pay prevailing wage or an equivalent, use a skilled and trained workforce or equivalent, and enter into a community benefit agreement.

And in order to grant a permit under this process, the CEC must make several findings, including that the project will have a net positive economic benefit to local governments.

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AB 205 also provides funds for the CEC to implement long-duration storage projects for the purpose of deploying innovative energy storage systems to the electrical grid to provide critical capacity and grid services. Projects are eligible for funding if they have a power rating of at least 1 megawatt and are capable of at least eight hours of continuous discharge. This program will fill a critical funding gap that exists in the later stages of technology development.

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Lastly, AB 205 directs the CEC, in consultation with DWR, the PUC, and California balancing authorities, including CalISO, to issue a written report to the Joint Legislative Budget Committee evaluating three elements: how the state load-serving entities, publicly-owned utilities, and California balancing authorities managed summer

reliability during 2022; the magnitude of projected reliability problems in 2023 through 2026; and potential solutions to addressing reliability concerns.

In preparing the report, the CEC shall evaluate options that rely on state budget actions, statutory changes, and using existing resource adequacy, integrated resource planning and other reliability processes at the PUC and CalISO to ensure reliability.

Next slide, please.

Now I'll turn to the provisions of AB 209. In addition to providing funding for a number of new programs, which I'll briefly touch on in the next slide, AB 209 direct to CEC, by December 31st, 2023, to develop recommendations about approaches to determine an appropriate minimum planning reserve margin for publicly-owned utilities within the CalISO balancing authority area, sufficient to ensure each POU is adequately accounting for its contribution to reliability in the CalISO balancing authority area.

The development of these recommendations will occur in a transparent public process that includes input from industry stakeholders, and in collaboration with CalISO and POU representative. The recommendations will include an implementation timeline, taking into account potential impacts on resource needs and availability of

clean energy resources. POUs are directed to use 1 2 recommendations in their Integrated Resource Plans. 3 Next slide, please. 4 AB 209 also establishes and funds several new 5 programs for the CEC to implement. I won't have time to describe these in detail, but these programs include the 6 7 Industrial Grid Support and Decarbonization Program, the 8 Food Production Investment Program, the Hydrogen Program, 9 the Equitable Building Decarbonization Program, Offshore 10 Wind Infrastructure Improvements, the Carbon Removal 11 Innovation Program, the Voluntary Offshore Wind and Coastal 12 Resources Protection Program, and the Climate Innovation 13 Program. 14 Next slide, please. 15 Next I'll cover the various directives in Senate Bill 846. 16 17 VICE CHAIR GUNDA: Lisa, just a quick minute 18 here, just to make sure. You know, there's a lot of 19 requirements there in 205 and 209. 20 Let me just see if Commissioners have any 21 questions before we jump into 846, because it's a separate 22 element. 23 COMMISSIONER MONAHAN: Hi. This is Commissioner Monahan. 24 I do have a question, just a basic one. 25 I'm not sure if it's for David or for Lisa, it's

probably for David, but for the report that we're going to be issuing on January 31st, will we be able to have an estimate of what the contingency resources delivered in the middle of that heat event? Right now we don't have that data but will we have it soon?

MR. ERNE: Yes, we are putting together the information that will describe what those contingencies brought during that period.

COMMISSIONER MONAHAN: And I do want to say, it's really great to be able to hear just all the different aspects of AB 205. So appreciate the presentations by both David and Lisa. It's really helpful.

VICE CHAIR GUNDA: Thank you, Commissioner Monahan.

And other -- it like, Commissioner Houck, you have question.

COMMISSIONER HOUCK: I just wanted to ask if the report, since you're looking at problems for 2023 through 2026, if you're also going to be including some of the additional electricity requirements we're going to need for decarbonization and electric vehicle transition?

MR. ERNE: Yes, Commissioner, we will be looking at that, both for this report, and you'll hear, as Lisa continues on 846, there's another report that's going to be a CPUC-CEC Reliability Report due December 15th. So some

of that will be in the December 15th Report, as well as the CEC's report in January.

VICE CHAIR GUNDA: Lisa, for me, I mean, given that this is a presentation for the record, would we want to go back to, quickly, the key legislative requirements, specifically to, you know, the slide 14 that you had? I wanted to just make sure that we talked through a little bit about the constraints of the 205 Program, especially DEBA. I think -- I know we're going to touch on that later today, you know, but if you could provide any broad strokes on, you know, how the 205 was structured in terms of the constraints versus the moneyed politics, which we'll get to?

MS. DECARLO: Sure, in terms of what could be funded? Yes, definitely.

So there are two broad categories of types of activities or projects that could be funded under DEBA.

One is efficiency upgrades, maintenance, and capacity additions to existing power generators for deployment of zero or low emission technologies, and this includes fuel cells and energy storage at existing facilities. Sorry, I think I combined two of those. So it's generally zero- or low-emission technologies, mainly at existing facilities.

VICE CHAIR GUNDA: So that's the supply side;

right? And then the demand side is probably -- you mentioned the disputed assets on the demand side. I'm just kind of trying to have this for the broader conversation so people can ask questions. Yeah, we could jump into it later.

MR. ERNE: And I also know, Vice Chair, that DEBA, as part of the strategic reserve, is meant for providing resources during emergency situations. It could provide resources outside of that, but the primary goal is to provide those during emergency situations. So differentiating that from some of the other programs that Lisa mentioned, which are -- you know, could be applied at any time as general load reduction resources. So we'll talk a lot about that more this afternoon, as well.

MS. DECARLO: Alright, so let's jump into SB 846.

First is the requirement that the CEC and the CPUC submit a joint Reliability Planning Assessment to the legislature on or before December 15th, 2022, and quarterly thereafter. This assessment must include a number of elements, a few of which are listed on this slide. In general, the assessment must identify estimates for the electrical supply and demand balance for the forward five-and ten-year period under high, medium and low risk scenarios.

Separate from this report, the CEC must continue

to report on California energy resources that serve California load in the energy almanac. The CEC is also directed to expand the almanac to include storage resources that serve wholesale load and, specifically, to report on resources that serve load in the CalISO system.

Next slide, please.

Senate Bill 846 also directs the CEC to take the following four actions with respect to the Diablo Canyon Nuclear Power Plants.

First, within 180 days after PG&E submits an application for funding to DOE for the power plant, the CEC is required to determine two things: one, weather the state's electricity forecasts for Calendar Years 2024 to 2030 show potential for reliability deficiencies if the Diablo Canyon Power Plant operation is not extended beyond 2025; and two, whether extending operations of the Diablo Canyon Power Plant to at least 2030 is prudent to ensure reliability in light of any potential for supply deficiency, and it's consistent with California emissions reduction goals?

PG&E submitted their application on September 2nd, 2022. Therefore, the CEC's determination is due March 1st, 2023. The CEC will make this determination through a public process in consultation with CalISO and the PUC, and by vote of the Commission at a business meeting.

Second, by July 1st, 2023, the CEC must publish a report that assesses the operation of the Diablo Canyon Power Plant. This report must include outage information, power plant operational costs, average revenues from electricity sale, worker attrition, and the power plant's contribution to resource adequacy requirements. The report must also be published by July 1st of each year following initial publication until 2031. And it must be developed in coordination with the PUC and CalISO.

Third by September 30th, 2023, the CEC must present a cost comparison of whether extended operations of the Diablo Canyon Power Plant, compared to a portfolio of other feasible resources available for Calendar Years 2024 to 2035, is consistent with the state's greenhouse gas emissions reduction goal. In doing this cost comparison, the CEC is required to evaluate the alternative resource costs and make the evaluations available to the public within the preceding docket.

Lastly, if at any time the cost of extension exceeds the loan limits provided in agreement between PG&E and DWR, the CEC must reevaluate the cost effectiveness of prolonging Diablo Canyon's operation.

Next slide, please.

SB 846 also directs the CEC, by June 1st, 2023, and in consultation with the PUC and CalISO, to adopt a

goal for load shifting to reduce net peak electrical demand and recommend policies to increase demand response and load shifting that do not increase greenhouse gas emissions or increase electric rates. The CEC must consider the findings of the 2020 Lawrence Berkeley National Laboratory Report on the Shift Resource Through 2030, and other relevant research ,and must adjust the load shifting target in the biannual Integrated Energy Policy Report, or IEPR.

Next slide, please.

The last directive to the CEC and SB 846 is to develop the Clean Energy Reliability Investment Plan, or as we affectionately call it, CERIP, to support programs and projects that accelerate the deployment of clean energy resources, support demand response, assist ratepayers, and increase energy reliability. CERIP will support investments that take into account all of the following: California's anticipated electricity supply and demand needs for near and midterm reliability; the advancement of the state's policies towards 10 percent zero-carbon and renewable energy resources by 2045; and the state's greenhouse gas emissions reduction target for the electricity sector.

Further, the Investment Plan must support the energy loading order, including investments in preferred resources, such as demand response and energy efficiency,

and reduced demand during the net peak load. The Plan will be developed in consultation with the PUC and Air Resources Board and must be developed with input from interested parties at scheduled public workshops and hearings and adopted at a publicly-noticed is this meeting.

Next slide, please.

Lastly, SB 423 directs the CEC, by December 31st, 2023, and in consultation with the PUC, CalISO, and the ARB to submit to the legislature and assessment of firm zero-carbon resources that support a clean, reliable and resilient electrical grid in California, and will achieve the state's policy that renewable energy and zero-carbon resources supply 100 percent of retail sales and 100 percent electricity procured to serve state agencies by 2045. We are also directed to incorporate this information into the IEPR.

Firm zero-carbon resources, are electrical resources that can individually, or in combination, deliver zero-carbon electricity with high availability for the expected duration of multiday extreme or atypical weather events, including periods of low renewable energy generation, and facilitate integration of eligible renewable energy resources into the electrical grid and the transition to a zero-carbon grid.

This bill will accelerate the development and

procurement of a diverse set of additional clean energy resources to bolster electrical grid reliability and resiliency and support economic development and job growth in a manner that aligns with the state's clean energy objective.

Next slide, please.

And finally, I will end with a picture of what all these statutory deadlines look on one slide, spanning the next 13 months.

This concludes my presentation. Thank you for sticking with me. It was a lot to cover.

VICE CHAIR GUNDA: Yeah, thank you, Lisa. So I kind of just want to give you and CCO and Linda Barrera a special thanks. Over the last several months, and I know how many nights and weekends you all worked on crafting, helping with the language, and everything, so just a sincere thank you. And thanks for that construction.

I see a number of questions coming through the chat for, specifically, looking at the transcript, because it's very dense material that we provided. So, you know, I think I see the answers, that we are going to provide the transcript to this. So let's docket, to the extent possible, all the connections.

One thing we didn't really get into during your presentation, if, you know, David and you can just spend

some time on, how you look at all the different things or the next, you know, 13 months, but also the PRM study. I don't think we talked about that specifically during the presentation.

MR. ERNE: Okay. So the PRM was discussed back in -- on slide 19 as part of AB 209's summary. And so there is a fair amount of work to be done in preparation for that.

But instead of going back to that slide, I want to take a look at the slide that Lisa put up here on a schedule, which is a different way of looking at all those requirements. So the requirements are pulled out, as Lisa did, by each of the individual pieces of legislation. This is meant to talk a little bit about or help to understand what those are relatively specific topics.

So the top line, Reliability, shows the Reliability Reports, including the PRM Assessment, very focused on that, although I will mention that there is overlap among these, the three bars that we have going across the slide, because there is a component looking at clean energy alternatives in the reliability requirements. There's a element of looking at clean energy alternatives and the Diablo Canyon slice. And, obviously, there's the clean energy in the bottom.

And so the reason for having our discussion

today, particularly this afternoon, is because we have a number of requirements to be considering different clean energy alternatives across a number of different bills, a number of different themes, if you will. And so this afternoon's discussion is meant to take a holistic look, a broad look at that. And then we'll, as we develop that analysis, we will utilize portions of it to support each of those individual elements.

So that's kind of how all of this ties together and relative to the workshop today. But we will be having other workshops that will be a little bit more focused on individual elements in here. But what we'll try to do to make it easier for the public is, where we can, we will combine topics, since there's so much overlap, so we don't give people workshop fatigue. But there's quite a bit for us to cover. And I'll talk a little about the workshop, kind of preliminary plan, this afternoon to cover that. But, yeah, there's a fair amount of overlap among the different topics.

Does that answer your question, Vice Chair?

VICE CHAIR GUNDA: Yeah. Thank you.

Just if, Lisa, you have the PRM statute available? Sorry. I mean, I think it's --

MS. DECARLO: Oh, that's okay. Yes. It's Public Resources Code 25704.5. And I can provide a little bit

more detail about the PRM. So here are the basic requirements provided for in the statutory language.

We're obligated to provide, through a transparent public process, a recommendation, including industry stakeholders, and indirect collaboration with POUs and the Independent System Operator, recommendation about approaches to determine an appropriate minimum planning reserve margin for POUs, specifically within the CalISO balancing authority area, sufficient to ensure that each POU is adequately accounting for its contribution to reliability in that area. And these approaches that are supposed to form the basis of our recommendation, they can vary by utility type, and they should take into consideration climate change, extreme weather events, cost effectiveness, and feasibility.

We're also obligated to provide an implementation timeline, taking into account potential impacts on resource needs and the availability of clean energy resources. And the statute directs the POUs to then use those recommendations in their Integrated Resource Plans.

And then finally, from time to time, the CEC is obligated to revise them as appropriate and in accordance with the processes set forth in statute to make sure -- and the revision shall make sure that the POUs are adequately accounting for their contribution to reliability as the

1 years go forward. 2 VICE CHAIR GUNDA: Thank you so much. There were 3 questions coming on that, so I wanted to make sure it's on 4 record. Thank you. 5 MR. ERNE: Any further questions from the dais? 6 Alright. 7 Why don't we move next to our presentation from 8 Pete Skala from the CPUC. He's the Director of Electricity 9 Supply, Planning, and Cost, and he'll be reviewing all of 10 the legislative requirements for the CPUC. 11 Pete? 12 MR. SKALA: Morning, everyone. I'm coming 13 through okay? MR. ERNE: Yes, we can hear you very well. 14 15 MR. SKALA: Okay. Great. Thanks. 16 So the primary piece of 2022 legislation with 17 CPUC requirements that are relevant to the topic of this 18 workshop is Senate Bill 846 which requires the CPUC to take 19 a number of actions on its own, and also directs the CPUC 20 to take joint action with or provide support to other 21 agencies. I'll cover both these categories. And then I 22 will also identify relevant CPUC actions required by 23 Assembly Bills 205 and 209. 24 Next slide, please. 25 So the first CPUC requirement in SB 846 is to,

within 120 days, issue a decision authorizing PG&E to take actions to extend the operations of the Diablo Canyon and to track all costs, both the DWR loan costs and CPUC jurisdictional repair costs.

As President Reynolds mentioned in her opening remarks, we've already reopened the relevant proceeding and are well on track to complete that first requirement. And by the end of next year, it's 12/31/23, we are to determine a final closure date for the two units where -- should the dates -- should we determine a date that is different than the five-year extensions and shorter than the five-year extensions identified in the statute.

There is also a direction to go do a number of things within what's referred to as an ERRA-like Energy Resource Recovery Account-like preceding. The ERRA proceedings are a function of decoupling in which generation and electricity costs are litigated separate from the general rate cases of the utilities, because those are all passthrough costs.

And so, generally, there's two phases to those proceedings, and sometimes two proceedings. One is a forecasting phase that allows the utilities to put into rates the expected costs for their energy spends, and then there's a true-up, and after, you know, a proceeding that looks at the costs and determines reason reasonableness.

So within that, those proceedings, were directed to, you know, set them up and implement them in a manner that enables PG&E to recover the reasonable costs and expenses of operating Diablo Canyon, authorizes PG&E to recover rates, and rates the operating fees that are identified in the legislation during the period of extended operations, and also determine whether PG&E is liable for any above market costs, energy costs, that result from any extended outages that the PUC determines were the result of continuing to not conforming with a prudent, reasonable manager standard.

We're also directed to establish new cost allocation mechanisms to recover costs from all CPUC jurisdictional entities. This is a mechanism that already exists for each of the three large IOUs when they're directed to make a procurement, typically reliability resource that the -- for which there -- you know, all customers in their territories benefit from so they are spread out, those costs and benefits are spread across all benefiting customers. We don't currently have a mechanism that does that across multiple IOU territory, so we'll need to create a new cost allocation mechanism for that purpose.

We're also directed to authorize PG&E to recover reasonable replacement power costs if incurred during any Diablo unplanned outage period. So this is really -- it's

called out separately, but it would happen in that same ERRA proceeding. And this would be an instance in which there was an outage that the PUC determined, you know, was not the result of -- you know, didn't violate the prudent reasonable manager standard and that they would be permitted to recover those costs if that were the case.

Another requirement is to determine whether and how much additional decommissioning funding is needed and authorized PG&E to collect that as needed.

Next slide, please.

These are still CPUC's, you know, specific requirements. They have been directed to ensure that sufficient funding for the Diablo Canyon Independent Safety Committee exists to attract qualified experts, and also required PG&E to respond to the findings and recommendations of the Committee and distribute those responses to various public entities.

We were directed to determine the disposition of Diablo Canyon properties in a manner that best serves the interests of the local community, ratepayers, California Native American tribes, and the state. Also directed to ensure that the energy and the capacity and clean energy attributes of Diablo Canyon are excluded from all IRP portfolios developed by the CPUC or CPUC jurisdictional load-serving entities beyond the current license expiration

date. So, basically, that all of our forward planning for in the integrated resource planning process does not include extended operations of Diablo and factor that in any way.

At any point during the license renewal process or extended operations period, there are several different references and directions for offramps if we determine -- if the PUC determines that continued operations are not reasonable as a result of the cost of performing upgrades needed to continue the operations for, you know, one or both units.

And then, finally, we are directed to verify, at the conclusion of the extended operation period, that PG&E sole compensation during the period of extended operations is limited to the payments, the volumetric and fixed payments, identified in the legislation.

Next slide, please.

So these are the tasks that CPUC is directed to either play a joint role or a supportive role. And some of this is going to overlap with Lisa's presentation, and others will be stealing some of Ted's thunder.

So the first one is this joint quarterly Reliability Planning Assessment that Lisa discussed.

The second is that we are -- DWR is directed to conduct the semiannual loan class true-up. And the CEC is

directed to support that effort. We are already coordinating with DWR to that end.

The CEC is also directed, in consultation with the PUC and CAISO, to adopt that the goal for load shifting that Lisa mentioned.

All relevant agencies, including the PUC, are directed to consult and work collaboratively with local California Native American tribes, including designating a tribal liaison to consider tribal use, access use, conservation, and co-management of Diablo lands. And the agencies are directed to work cooperatively with tribes interested in acquiring the Diablo lands.

In coordination with the CEC, the Independent System Operator and DWR, we're directed to submit this report to the legislature each year on the status of new resource additions that Lisa mentioned.

And, finally, were directed to support the CEC in developing an assessment of the Diablo operations that lease also mentioned.

And next slide, please.

Finally, turning to relevant CPUC requirements in Assembly Bills 205 and 209, 205, we are directed to develop an income graduated fixed charge for residential rates.

And we are required to ensure that the lowest tier of the fixed charge results in a lower average monthly bill for

1 low-income customers without making any change -- without 2 them making any change in their usage. And we're also 3 directed to ensure that the approved fixed charges do not 4 unreasonably impair incentives for beneficial 5 electrification and greenhouse gas reduction. In AB 209, we are -- AB 209 allows that solar-6 7 only projects, which were previously intelligent eligible in the Self-Generation Incentive Program, SGIP, to begin 8 9 receiving incentives, and requires any additional 10 incentives for solar-only and solar-plus storage above the 11 SGIP's previously authorized ratepayer funded budget to 12 come from legislative appropriation. 13 And, finally, AB 209 allows CPUC staff to share 14 confidential information with California Independent System 15 Operator in order to facilitate coordination on some of the 16 various reports and forward-looking forecasts that we're 17 expected to perform collectively. 18 That concludes my presentation. 19 MR. ERNE: Thank you, Pete. 20 Vice Chair, would you like to take any questions 21 from the dais before we move to Department of Water 22 Resources?

MR. ERNE: Okay.

don't have any questions for Pete.

23

24

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VICE CHAIR GUNDA: Yeah. I'm just looking.

1 COMMISSIONER MCALLISTER: I did have one 2 question, actually. This is Commissioner McAllister. 3 VICE CHAIR GUNDA: Go ahead, Commissioner. 4 COMMISSIONER MCALLISTER: Pete, AB 209, I see it 5 has requirements for additional incentives for solar-only and solar-plus storage. What's the status of storage-only 6 7 in terms of the incentive landscape? 8 That was already included. MR. SKALA: 9 already permitted. So I think that's why the built-in 10 focus on it. 11 COMMISSIONER MCALLISTER: Oh, it's already --12 MR. SKALA: This program is largely a storage --13 behind-the-meter storage program at this point. 14 COMMISSIONER MCALLISTER: Because standalone 15 storage is, from our perspective, is kind of fully enabled? MR. SKALA: Correct. 16 17 COMMISSIONER MCALLISTER: Okay. Great. Thanks. 18 VICE CHAIR GUNDA: I have a follow-up question 19 too. 20 The SGIP Program, what's the current status on 21 the thinking of the PUC and timelines for that? 22 MR. SKALA: So that is -- I work on the bulk 23 power stuff, so I actually do not have a -- I can get you 24 that information but I don't know. I don't have it at 25 hand.

1 MR. ERNE: Thank you, Vice Chairman. Thank you, 2 dais. 3 So let's move to our last speaker, Ted Craddock 4 from Department of Water Resources, the Deputy Director 5 there. Thanks Ted. 6 7 MR. CRADDOCK: Thank you, David. And good 8 morning, Commissioners, other members, and members of the 9 public. It's really good to see everybody today. 10 What I'm going to do is provide an overview of 11 DWR's role with the implementing the legislation, 12 specifically the Strategic Reliability Reserve, and also 13 Senate Bill 846. 14 I did want to just repeat what the other speakers 15 have said that this is really a collaborative effort 16 between DWR, the Energy Commission, CPUC, and the 17 Independent System Operator, and other agencies that we're 18 working with, and our partners. And so it's really a team 19 effort to move all this forward to support the state's 20 grid. 21 Next slide, please. And maybe move one more 22 forward as well? 23 So I think we've already, you know, covered the 24 different legislation that -- in the prior presentation, so 25 maybe we'll move past this slide, as well, and I'll just

cover, more specifically, the Department of Water
Resources' role. It's really focused on providing
additional resources to support the state's electric grid
specifically for extreme events, as David talked about
earlier.

This slide does have a picture of two of the 30 megawatt generators that we installed at the Roseville Energy Center. And these generators, as David mentioned earlier, with the other resources brought online and 2021 and 2022, are very critical in supporting the state's electric grid during extreme September heatwave.

Next slide, please.

And so specifically in AB 205 and 209, DWR's role is to identify, prioritize, and select new generation projects as part of the Strategic Reliability Reserve to develop and execute contracts and agreements for those projects. We're also tasked with overseeing the engineering, procurement, and completion of the different types of projects and energy procurements, also ensuring that we're complying with environmental requirements and the certification processes, administering the funds, as well, as part of the Strategic Reliability Reserve Fund. And we've already talked about working, you know, very collaboratively with our other agency partners and partners in the industry and state.

And then additionally, there's specific requirements regarding reporting. We'll be coming to the Energy Commission's business meeting to provide a more detailed report in November. And we'll be doing that on a quarterly basis moving forward.

Additionally, we'll be providing reports to the legislature, written reports, starting at the end of January and quarterly thereafter, as well, in terms of the work and details related to the Strategic Reliability Reserve.

Next slide, please.

So the types of projects that were identified in AB 205 are listed here. Lisa already did a nice summary of these, but I will just maybe repeat that, you know, the focus is on extending operations of retiring facilities that can help fill that, you know, need to cover extreme events. Also, emergency and temporary generators. The emergency generators were really focused on the work that was done this year. And then also storage systems greater than 20 megawatts with certain characteristics, as you see there. Zero-emission technologies, such as fuel cells. And, also, helping to procure imported energy to support the state's electric grid.

Next slide, please.

So I did just want to highlight the work that's

already been completed for this year that really did make a difference and help during the September extreme heat event.

So the combination of the emergency generators that were installed last year, plus this year, at six sites throughout the state, working with our partners at Southern California Edison, Pacific Gas and Electric, Roseville Electric, and Calpine resulted in a capacity of 200 megawatts that was available for peak emergency extreme event needs to in September.

And then, additionally, working with our partners that at the Southern California Edison, PG&E, and San Diego Gas and Electric, we were able to also help procure 1,400 megawatts, or up to 1,400 megawatts, of imported energy to support the grid as well.

And so just this year alone, the Strategic Reserve, as David mentioned earlier has, you know, played a role in really helping the grid.

Next slide, please.

And I just wanted to talk about the future planned investments and the relation to the legislation.

So AB 205 and 209 also includes, you know, forward-looking work, as described, to procure, you know, additional temporary generators, also extend the life of retiring plants that make sense to include in the Reserve.

What are currently being looked at are facilities, such as those in the South Coast, to be extended for a few years that, you know, help with the clean energy transition.

And then additionally, under Senate Bill 846, we've worked been working with PG&E on developing agreements to assist with the relicensing process or the permitting process for Diablo Canyon, and then to help facilitate funding, bridge funding, for a loan under the Department of Energy's Nuclear Credit Program that was authorized under the Bipartisan Infrastructure Act.

So that's really an overview of the activities we've been doing as part of the climate and energy legislation. And I look forward to providing, you know, additional details at the upcoming business meetings here with the Energy Commission, so thank you.

MR. ERNE: Thank you, Ted, Lisa and Pete.

So we'll now move to our Q&A portion. And we'll start with the dais, and then we'll move to any questions in the room, and then to those on Zoom. Remember that if you want to ask a question and you're on Zoom, please use the Q&A function. And we have -- Chie will be curating those and providing those when we get to the Zoom portion.

So to you, Vice Chair.

MR. SKALA: Actually, this is Pete. Can I jump in? Because I did get an answer to the question that was

asked earlier on the PUC status on implementing 209 and the SGIP.

We did, actually, just issue a ruling on Wednesday to implement 209 within the SGIP procedure.

VICE CHAIR GUNDA: Thank you, Pete.

So I think we have a lot of questions on the Q&A box, which we'll use.

But I think I want to just take an opportunity to say thanks to Ted and the entire team at DWR, Bezard (phonetic) and Tony, for the amazing work you've done this year. Bezard, I think all the way from 2020, you have been in the middle of this, one way or the other. And, you know, of all the state agencies, you know, the amount of work that you brought to the table to keep the lights on was tremendous. So I just want to give a big shout out to DWR for the work and look forward to partnering with your team.

I also want to elevate and thank Pete Skala, specifically. Starting 2020, at root cause analysis, he's been the front of reliability and has been doing tremendous work behind the scenes, hours and hours that he puts in, so happy thank you to you and the entire CPUC team that supports you there, and also Luan (phonetic), who has been an excellent addition to our team, so thank you.

And CAISO, just want to say, Pete, to you, Mark

Rothleder, Eliot, but also, you know, one of my favorite people in the world, Delphine. So just to thank you for all the work that you've done to keep the lights on, so thanks.

I have plenty of questions. We'll come back and use the time, if they're not elevated, but I'll defer to other colleagues on the dais.

PRESIDENT REYNOLDS: I just also wanted to thank all of the staff for me to the agencies. This has been an extremely challenging time with a lot of complex maneuvering to do and everybody stepped up to do their part. And it's just, despite the challenges, amazing to watch how well folks have worked together in the different agencies to come up with solutions. And I really appreciate all of the presentations and overview this morning.

VICE CHAIR GUNDA: Commissioner McAllister, it looks like you have a question. Go ahead.

COMMISSIONER MONAHAN: I do. I'm heaping on the praise for the cross-agency collaboration, which has really been tremendous. And Vice Chair Gunda and I were commenting before about how sometimes crisis brings collaboration, and this is a case where it definitely did. And we're going to continue to need to collaborate really deeply as we go forward.

And I have just a general question about how, I guess we would just call it broadly, equity or, you know, concerns around communities already disproportionately burdened with air pollution, how the different reliability strategies are addressing that issue? And I'm honestly not sure whose in the best position. It might be Vice Chair Gunda.

VICE CHAIR GUNDA: Yeah, I'll begin and pass it to you, David and Lisa, if you want to add anything.

So, Commissioner McAllister, thank you on two fronts, one, raising the question, and always keeping, you know, equity in the middle of the conversation that we don't forget.

So I think I've made a couple of comments in the past about, you know, one of the sobering parts of this reliability problem has been to really acknowledge that, you know, some of the things we did this summer to keep the lights on were to turn on every backup generator we could, you know, and so that, oftentimes, are in communities that we would not want them to be. And so just wanted to acknowledge the problem that you just raised in terms of the impact that that, you know, might have to be relied on, especially in the near term.

So there are a couple of provisions. One is, obviously, in the 205. There is mitigation requirements

for some of the things -- action we would take. So especially CARB has a role in assessing them and supporting exactly what the mitigation strategies should be.

The other element that we are talking about, you know, as DWR contemplates the holding on and extending some of the power plants, you know, I think that that's a discussion we are discussing internally, and how best to support that.

But I think this really elevates the conversation we're going to have this afternoon, but the billion dollars that we have, and then DEBA money: How do we want to spend this money in a way that, you know, we accelerate cleaner options as much as possible? And, also, the distribution side of the equation; right?

I mean, the equity and communities have been really raising the need for distribution-side investments as a way to provide reliability and resiliency in the community. So I think it's an important conversation and I hope to have that.

But you're absolutely right, there are some things we have in the language, but some we should do as a matter of principle.

COMMISSIONER MONAHAN: I was thinking about how we often talk about the loading order, which does -- which can, you know, support equity by, basically, having sort of

the resources located in disadvantaged communities the last resort. And you can also think about this unloading order, so where do we want to start unloading assets that really should be prioritized for decommissioning?

VICE CHAIR GUNDA: And I love that. So I think we have been talking about that, but I like the unloading term. Thank you.

MS. DECARLO: And there -- Lisa DeCarlo, Energy Commission Staff Attorney -- there is a loading order in implicit in DEBA. And let me take this opportunity to provide a little more clarification on DEBA.

So I just want to clarify my previous statement about the resources available under the program. So there's two distinct categories. One is the efficiency upgrades, maintenance, and capacity additions to existing power generators. And then the second category is deployment of new zero- or low-emission technologies, which could include fuel cells or energy storage, among a number of other technologies, add existing or new facilities.

And then the statute is very clear that there's -- the guidelines that the Energy Commission needs to adopt to implement the program needs to incorporate a loading order for the distribution of funds, and that is: first, priority should be going to feasible cost-effective demand response and efficiency resources; second, to

feasible cost-effective renewable and zero-emission resources; and last, would be feasible, cost effective, conventional resources. So it doesn't talk about the locations of these or disadvantaged communities but it's definitely prioritizing the cleaner technologies for implementation.

And then I'll just note that the funding recipients in this program have to participate in, as an emergency on-call resource, either in DSGS or another program.

VICE CHAIR GUNDA: Thank you so much for that, Lisa.

13 Neil?

VICE PRESIDENT MILLAR: Yes. Thank you, it's an Neil Millar here with the ISO.

I just wanted to reiterate the importance, as well, of having these, especially if we're talking about transitioning out for the reasons are discussed, the dependence on some of these local fossil fuels units, how important it is that we have a tight plan in place, see it coming, and know what the replacement resources are by location. Because, to the extent some of these cannot be replaced with clean energy sources in the same area, the transmission that would be required to get into these areas are generally going to be challenging to get cited and

permitted. So we will need to make sure we have adequate time to get the grid reinforced if we're not able to replace with local clean resources.

Thanks.

VICE CHAIR GUNDA: Any other questions from the dais? Commissioner McAllister or Commissioner Vaccaro?

COMMISSIONER VACCARO: No, nothing more for me, just thank you to everyone. This has been a very informative morning. I appreciate it.

VICE CHAIR GUNDA: Thank you, Commissioner.

So with that, I'll pass it back to you, David, for directing the Q&A.

MR. ERNE: Thank you, Vice Chair.

So we'll start with if there any questions in the room? We have one question. They'll be coming up to the dais -- or coming up to the table -- to the podium.

MR. JOHNSON: Good morning. Kurt Johnson from the Climate Center.

If I understood correctly, by December, pursuant to SB 846, there needs to be a forecast that looks at, you know, load, and then reliability estimates based on their available resources. It looks like in 205, there were some capacity constraints in what can meet that load, but that limitation is not present in the analysis for SB 846; is that correct?

VICE CHAIR GUNDA: David, would you take that?

MR. ERNE: There were some constraints on the capacity of the energy storage, for example, like it had to be 20 megawatts. But pursuant to the analysis for SB 846, there wouldn't be a preclusion of clean the DER that would say be above, no.

MS. DECARLO: I think I understand. So the constraints that I mentioned were specific to the Energy Commission's permitting of DWR facilities for the authority we were given for those portions of the facilities DWR is allowed to engage in. But it doesn't pertain to our analysis of implementing the other provisions in 846, or these broader planning goals.

MR. JOHNSON: Yeah, I think that's really important, because I want to call to folks attention that the comments made by Chair Hochschild, I believe, I heard on October 4th, when he was ballparking, he said, hey, we got, you know, say a million electric vehicles, ballpark it at 10 gigawatts, if you project forward say, okay, by 2030, low end, maybe we got 5 million EVs, so there's, you know, 50 gigawatts. You know, we just allocated \$10 billion for this ZEV budget, so I think it's those are fair assumptions.

And then just say, okay, well, if there's 50 gigawatts of EVs by 2030, you know, what are we doing to

sort of harness those to, you know, meet reliability; right? So then that would mean, say, four percent of those if they were sort of online between 4:00 and 9:00 p.m. Well, that's the rough capacity equivalent of Diablo.

So my question is: Will the report, which comes out in December, include options like that and their associated magnitude of these resources to be alternatives to Diablo? So that's one question.

And then another question is: You know, we've made a lot of state investments in clean DER, you know, lots of money on distributed batteries, we just allocated another \$900 billion for SGIP, most of which was for energy storage, could utilization of those assets for reliability also be part of the analysis done by December of this year?

VICE CHAIR GUNDA: Yeah, let me just set the stage. And then, David, please jump in here.

So just excellent comments and questions. I think there's the analytical framework, as Lisa noted, will be very comprehensive, that's at least the desire of the Energy Commission, comprehensive and coordinated with the rest of the agencies.

So when we're looking at the options, the different options that we could have in terms of reliability crisis, and the prudency of Diablo, all the things that you just mentioned will be a part of the

analytical framework.

As far as we look at the specific requirements in 846 and 205, the very first report -- so we have quarterly reports. So the very first report will, as I understand from David and team is, we're going to just establish the basic demand and shortfalls at this point in December and have a look back on what happened. But as we go into next year, there will be reports on, based on the deadlines we have, a comprehensive report on all the alternatives and, you know, what alternatives could be done.

And I think I mentioned the tradeoffs question earlier. And I think the tradeoffs come from our ability to do a certain thing in a certain given a given time right now, how fast can we build, how fast can we use V2G, and what are kind real-world experiences and perspectives on what's feasible? So we're going to take that into account? You know, we're looking at cost. We're looking at nonenergy benefits and what the impacts of that could be. So I think it'll be a comprehensive analysis next year.

So maybe, David, do you want to add anything else to that?

MR. ERNE: Thank you very much it.

You know, as an example, Governor Newsom has said, hey, by 2035, you know, we're going to phase out. So you know, if you look at options, if you were to consider

if all of those were, say, bidirectional by 2035 as part of the analysis, you know, that starts to yield some really big numbers quickly, which could become sort of a critical part of the forecasting going forward. So I just want to make sure that's part it.

But, anyway, thank you.

VICE CHAIR GUNDA: Thank you so much.

MR. ERNE: Thank you, Kurt. So let me let me add on to what the Vice Chair was saying, and there's a couple of pieces here, I'll try to make sure that I make it clear. We have a number of overlapping requirements and we're trying to align those as best we can. And if we can combine them, we will, to make it easier for people to digest all this information.

But to your point about the report this -- in

December, as Vice Chair mentioned, it's going to be looking

more about the current situation, and we've been asked to

look at a high, medium, and low risk scenario moving

forward. We will not have done a complete analysis of all

the other programs and how the other programs might

influence our portfolio of resources moving forward.

But a key part of the Clean Energy Reliability
Investment Plan, CERIP, is to look at where we think there
are gaps in opportunities for deployment of resources,
clean energy resources, that will help us with overcoming

aspects of retirement, but also complement the many other programs that are out there.

So in one of Lisa slides, she put up a slide that showed all the different pots of money that came out from this year that relates to clean energy. And our intent in the Clean Energy Investment Plan is to look at those and see what those are or are expected to be supporting, and then look at other things that could be done and whether those could be funded by the Clean Energy Investment Plan as it's funded by the legislature moving forward so that we fill in the gaps.

So the intent is to reduce or completely minimize any duplication of programs and make sure that we're creating a more comprehensive strategy for the state, kind of considering all those different pieces together. So that will be in the Investment Plan, that we'll lay that out.

And that's part of what we're talking about afternoon, which is, you know, here's a laundry list of all kinds of clean energy alternatives we should be thinking about. Are there ones that we're missing, ones that should come off the list? We're going to utilize this list in the analysis of it in order to support all these different requirements, whether it's the Investment Plan, whether it's comparison

to other programs that are going on, we're trying to bundle all that together. So today's --- this afternoon's conversation is really about setting the stage for how we can think about all these resources, analyze them, and then utilize our knowledge from that to inform individual efforts from the various bills.

So that's the longwinded answer to that question.

Any other questions from the Dais? on that? Any other comments?

If not, we can go to zoom Q&A. So I'll turn to Chie, who will be reading out the Zoom Q&A. And remember, we are using the Q&A function in Zoom for questions, so if you have any additional ones. And you can also upvote, use the up vote feature within Zoom. If you like a question that's on their or you have one that's similar, you can always do the upvote and it will bring it to the top of the queue.

We'll start with Chie with your first question.
MR. YANG: Thank you, David.

The first question is from Carrie Bentley with Gridwell. "For AB 209, is there a recommended PRM consider the CPUC authorized PRM for its jurisdictional entities?"

MR. ERNE: The answer that question is, yes, we will be considering all of that as we work through and develop the recommendations for the PRM.

MR. YANG: 1 Next question from Rick Brown. "Will 2 there be a report on the heatwave with the details and the 3 cost of the contingency reserves used during that time?" 4 MR. ERNE: Yes, there will be a report out on the 5 overall summer, including the August 31st through September 9th heatwave. That will be a part of the report that is 6 7 December 15th, but more comprehensively in the January 31st 8 report. VICE CHAIR GUNDA: Chie, just wanted to add that. 9 10 I think, you know, the sentiment of the question, 11 if I'm reading it, right, is the transparency of the 12 information. That's spelled out very clearly in the 13 legislation, the transparency around the reliability and 14 the investments, so we'll do our best to, basically, peel 15 the onion on the different costs to the extent that we can. 16 Thank you. 17 MR. YANG: The next question is: 18 "Will Diablo Canyon's continued operations be eligible 19 for DEBA or is that only available for battery 20 storage/renewable facilities?" 21 So the answer to that is, no, Diablo MR. ERNE: 22 Canyon will not be eligible under DEBA for any kind of incentives. 23 24 MR. YANG: Next question from Kate Unger. 25 "Please provide more information about the planned RFI

including the expected timeline for responses, if available."

MR. ERNE: Sure. So we anticipate having the RFI out by next Friday. And we want to have responses done by the end of November. So November 30th is what we're currently projecting to be the timeframe to provide comments on that RFI. And we'll talk a bit more about the questions that will be included in the RFI, the things we'll be looking for. That'll be a predominant part of our focus of this afternoon's conversation.

MR. YANG: "The emergency gen 200 megawatts, what length are these available to overcome grid emergencies? Is it over two hours? Up to four hours?"

MR. ERNE: I think that one's for you.

MR. CRADDOCK: Thank you for the question. The emergency generators that were used this year were used during a declared event by the CalISO, and so they were available during that period of the event, which I believe was, you know, typically on the order of few hours during the specific days during the heatwave.

VICE CHAIR GUNDA: And it just died on that one. Could you just expand the feasibility of running them as long as you need? I think that's the sentiment of the question, if you want to talk to them?

MR. CRADDOCK: Yeah, thank you for that follow up, Commissioner. That is correct. The resources are available to operate for an extended period of time but specifically, you know, as requested for to respond to an extreme event.

MR. ERNE: Thank you. Next question, Chie.

MR. YANG: Next question is from Ravi Menon with HyAxiom Inc.

"For Ted Craddock: Are you open to installing lowemission, lower than your existing gas generators, fuel cells to support the grid at the CDWR power plant generating plants?"

MR. CRADDOCK: Thank you for the question. Yes, we're exploring all, you know, options for the temporary generators sites that that we're looking at.

MR. YANG: Next question from Daniel Barad with the Sierra Club. "Is there a public process for deciding which facilities DWR extends under AB 205?" And second part of the question, "Are there criteria for not extending facilities in overburdened air basins?"

MR. CRADDOCK: Thank you for the question. So we'll be using -- or presenting at the next business committee meeting the options that DWR is looking at as part of the Strategic Reserve. And then we'll also be presenting on a quarterly basis. So that's really intended

1 to be the process that will allow public input into the 2 decisions being made. 3 MR. ERNE: And to clarify, that CEC's business 4 meeting that you'll be presenting at, correct? 5 MR. CRADDOCK: That's correct. Thank you, David. MR. ERNE: And the next one will be November 6 7 16th. To have the date rig? Yes, November 16th. 8 VICE CHAIR GUNDA: Thank you, David. 9 MR. YANG: Next question from Robert Perry with Synergistic Solutions. 10 11 "How does adding temporary generators and extending 12 the life of existing power plants contribute to 13 California's energy, environmental, housing, and 14 transportation goals?" 15 MR. SKALA: So I'll start with that, if you don't 16 mind, Ted, and then if you want to add on to that? 17 So, you know, the desire is to ensure that we 18 have a reliable system, and that it's clean. And we can't 19 always implement clean technologies as rapidly as we would 20 like to. And so the legislature allowed for the 21 opportunity for certain limited funding of resources that 22 are not -- that are fossil-based, but to minimize that and 23 to focus more on the clean energy over the long term. 24 And so it is our goal, it is our intent to focus 25 on the clean energy, but we also have a very strong resolve

to ensure grid reliability.

COMMISSIONER HOUCK: Second part of the question?

"Doesn't it make more sense to invest in new

construction, 3 million housing units by 2030, 7

million housing units by 2035, that contains

distributed technologies providing near 100 percent

energy resilience that obviates the need for backup

assets?"

MR. SKALA: That's a very good question. I don't have the answer to it but it's certainly worth exploring in terms of options moving forward for the state.

VICE CHAIR GUNDA: Yeah, I just wanted to add, Chie, there.

Thank you, Robert, for that question. I think
David summarized it really well. The legislative process
had to go through kind of a multitude of policy goals and
the goals for the state, and how do we balance that? And
to my earlier comment, I think that really is the art of
the feasible. I think, you know, a majority of us in this
room, and who's attending this workshop, would want to be
at 100 percent tomorrow, if we can, across all elements and
be reliable, safe and affordable.

I think the hard part here is how do we move towards the clean energy transition as quickly as we can with the ideas that you just propose, which is, you know,

1 increasing the distribution-side assets and distribution 2 technologies? But I think, you know, it's the feasibility, 3 the reliability question, and love and welcome further 4 comments from you to continue this discussion. 5 MR. ERNE: Thank you, Vice Chair. Next question. 6 7 MR. YANG: Next question from Tim Smith. "Will, the CEC be using consultants for this docket or will 8 9 analysis be done, performed by internal staff?" 10 MR. ERNE: So we will be utilizing consultants in 11 our analysis for -- and we'll be discussing it a little bit 12 this afternoon as well. 13 MR. YANG: Next question from Marty Brown. "In the area of distribution, won't electrons provided 14 15 by Diablo be a roadblock to the power resources of 16 renewables being distributed on the same power line?" 17 MR. ERNE: Do you want to answer that, Neil? VICE PRESIDENT MILLAR: Sure. Yes. It's Neil 18 Millar here with the ISO. 19 20 So we have been studying the amount of power that 21 can be connected to the 500 KV system coming off, assuming 22 at some point, development of offshore wind in the Morro 23 Bay-Diablo Canyon Call Areas. And that's part of our 24 annual transmission planning process. We've been providing 25 those assessments. And the transmission system there, with

the appropriate interconnections, can accommodate considerable additional power coming on to that network.

And I would refer you to our annual Transmission Plan for the details.

Thank you.

MR. YANG: Next question from Robert Perry.

"Assuming an average of residential HVAC load of 3 to 3.5 kilowatts, participation by 12 percent of California's 14 million housing units would result in a 5 gigawatts statewide load reduction. Wouldn't money be better spent on providing smart thermostats that allow households to participate in and be compensated for the massive demand flexibility potential that currently exists in California?"

MR. ERNE: I think the answer to that is we do believe that that would be a very important tool to applying. And that's one of the solution, one of the many solutions, we'll be discussing this afternoon that we'll be analyzing for the Clean Energy Investment Plan.

VICE CHAIR GUNDA: Yeah, and I also just want to -- sorry, Robert. In your earlier question, I didn't complete my thought process, which is the different funding buckets that Lisa mentioned earlier includes, you know, building decarburization funding, SGIP funding. So there is a variety of tools the legislature provided us.

But you know, as to David's point, you're absolutely right, there's a number of different options we can do, and look forward to the discussion.

MR. YANG: Next question.

"Will CEC's Clean Energy Reliability Investment Plan in SB 846 be related to the new Clean Energy R&D/ Reliability Program established in this year's budget?"

MR. ERNE: Yes. So we are looking across all other existing programs that are going to be funding clean energy alternatives, including the R&D program, and incorporating that into our analysis in the in the clean energy investment plan.

I will say that the Investment Plan is intended for mature technologies in the near term, whereas R&D is looking for developing newer technologies or improving those technologies over the long term. So there might be some overlap but that may not be as much, just because of the difference in focus.

VICE CHAIR GUNDA: Chie, I just want to add. Thanks, David.

And think I just want to reiterate what just David said, and I just want to elevate a comment he made earlier, which is a part of the analysis is to looking at all the existing funding that we have through not just CEC

but to CPUC and such, and then think through where the gaps are and where the money would be well spent. And, again, this is going to be a public discussion. We're going to work on it together.

MR. YANG: Next question from Michael Day.

"We are regularly talking about assets being available for emergencies, but the best would seem to be assets that participate regularly and, potentially, daily.

If they are participating daily then, by definition, they would be available during emergency days, as well, so long as reasonably scheduled. Is the need for availability during emergencies preclude assets that can participate daily?"

MR. ERNE: So I think that's a great point from the question, and that is we want to minimize the incentivizing something that could be a stranded asset or a limited assets. And so we're going to be looking as broadly as we can within the confines of what's required for each program to make sure that we're incentivizing resources that can provide, you know, as much as daily opportunities for the customers that are deploying them, and not just for emergency purposes, and so that is our goal. Some programs are focused more on the emergency piece. But we're trying to be as open as we can within the confines of the requirements for the programs.

1 MR. YANG: Next question from Craig Jenkin. 2 "Does AB 209 include funding for industry, which would 3 improve the cost effectiveness of renewables/zero-4 carbon resources the CEC has determined to be most 5 efficient?" I don't believe there are programs in 6 MR. ERNE: 7 209 that's a funded program associate with that, is there, 8 Lisa? 9 MS. DECARLO: Nothing's coming to mind for me. 10 MR. ERNE: Most of the funded programs fell under 11 205 or 846. And so in terms of those programs, we are 12 thinking about those opportunities. 13 MR. YANG: Next question. "When will the more 14 comprehensive assessment of Diablo alternatives and 15 tradeoffs be released?" 16 MR. ERNE: The legislation requires that to be 17 released in September of next year. We are looking at 18 whether we can accelerate that schedule. No promises, but 19 some of the analysis required in that report may be needed 20 for our report in March, and so we're trying to see whether 21 we can combine those two, but they may be one or may be two 22 separate, but the legislation specifies September. 23 MR. YANG: Next question. 24 "What would be the best contact at CEC we should 25 connect to as an innovative provider to professional

drone inspection, analysis, and measurement of energy 1 2 construction sites of solar, windmill and storage at 3 any phase of the project?" 4 MR. ERNE: I get your pardon? 5 VICE CHAIR GUNDA: I think we should just follow 6 up on that question. 7 MR. ERNE: Yeah. Yeah. We'll follow up with you 8 on that question as to who is the right person to talk to. 9 MR. YANG: Next question from Patrick Welch with 10 CMUA. 11 "Will the Clean Energy Investment Plan only focus on alternative capacity to Diablo or will there be a 12 13 focus on more forward-looking investments that could 14 also help utilities not served by ISO transmission?" 15 MR. ERNE: So the Clean Energy Reliability 16 Investment Plan is not Diablo focused, it's broader than 17 that. We will utilize some of the analysis we do for the 18 Investment Plan in our cost comparison for Diablo. But the 19 broader intent is to look at solutions that can provide 20 value over the long term for the state not specific to 21 Diablo. 22 Next question. "Can you give more information 23 about the expected timeline for future workshops?" 24 MR. ERNE: I'll be talking about those this 25 afternoon.

1 MR. YANG: "Can smaller generators be aggregated 2 to meet the 5 megawatt requirement. Is their flexibility in the 5 megawatt requirement?" 3 4 MR. ERNE: I'm not remembering a five -- Lisa? 5 MS. DECARLO: That might pertain to the Energy Commission's permitting authority for DWR resources. 6 7 Is there a chance to get clarification on the 8 question? 9 MR. YANG: We'll come back with the count 10 clarification. 11 Oh, the next question. "Why isn't the end of 12 Diablo Canyon tied to reduction in gas usage and emissions 13 instead of randomly assigned year?" The decision for -- you mean for the 14 MR. ERNE: 15 original closure or the extension? 16 VICE CHAIR GUNDA: I think it's the extension 17 study. 18 Dan, thank you for that question. I think, you 19 know, within the legislative requirements, you know, the 20 ask is to look at the prudency of continuation, so that's 21 what we'll be looking at. But I definitely see your point 22 of the broader benefits for -- from an emissions 23 standpoint. Thank you. 24 MR. ERNE: So, Vice Chair, a question for you in 25 terms of process. We have attended what's left for the

morning. Would you like to continue with any questions or move to public comment?

VICE CHAIR GUNDA: Yeah, I was just watching that, too. It looks like the questions keep increasing, so how about we take a couple more questions and go to public comment at 11:55 and extend the morning session by another five minutes?

MR. ERNE: Alright. Sounds good.

Thank you, Chie. Continue.

MR. YANG: Next question from Ben Schwartz.

"One of the benefits of distributed energy resources is that they can be deployed much faster than utility-scale resources. Have you considered policies that increase the number of DER by average ratepayer or targeted DER deployments in areas of need/DAC?"

MR. ERNE: So we have made recommendations, policy recommendations, in the IEPR for those particular directions. And we are looking at how we can utilize the programs that came out this summer to implement some of those activities.

MR. YANG: Next question from Heather Hoff.
"It doesn't seem like we will ever need less clean
energy, given the desire to electrify, and also the
potential for development of clean hydrogen and more
desalination. Given the desire to focus on clean

electricity, it seems like we shouldn't be talking about potentially running Diablo for less than 20 years, and especially not less than 5 years in SB 846. Will continued operation of Diablo be even more cost effective after relicensing?"

MR. ERNE: And the answer to that will be part of our analysis next year on the cost effectiveness, so we'll be looking at that relative to clean energy alternative portfolios.

MR. YANG: Next question from Patrick Welsh.

"A lot of these programs focus on generation. Is
there any funding available for transmission and/or
distribution investments needed to support the
generation?"

MR. ERNE: These programs were focused on distributed resources, not on the transmission or distribution system.

VICE CHAIR GUNDA: Yeah, I think the specific part of the second question is poles and wires investments.

Patrick, I recognize the opportunity for customer affordability there, but I do not believe the requirements or the provisions of the funding streams currently allow for that.

PRESIDENT REYNOLDS: But we do recognize the importance and the need to have sufficient grid

infrastructure to accommodate the resources.

VICE CHAIR GUNDA: Absolutely. Thank you.

MS. DECARLO: I will note, just really quickly, as part of the opt-in permitting portion, we are allowed -- the Energy Commission, as part of our streamlining permitting, does have authority over the interconnection between one of the facilities listed and the first point of interconnection. So there's a small bit of streamlining there in terms of that.

VICE CHAIR GUNDA: I'm thinking maybe a couple more questions. And then I think we're already at 11:53. And then we can go to public comment.

MR. YANG: Next question from Rick Brown.

"High- speed rail will be bringing a large amount of load, TND infrastructure, and distributed energy resources late this decade. Is this being considered in the analysis of long-term reliability needs and options?"

MR. ERNE: The answer to that is, yes, we have looked at the potential load associated with high-speed rail as part of our Demand Forecast and evaluating that in terms of the of the demand moving forward for the state.

VICE CHAIR GUNDA: Just specific to the TND infrastructure and distributed energy resources, I think we haven't necessarily looked at that part into integrating in

1 our analysis, but that's a good point, Rick. We'll look 2 into what we can do. 3 And, Neil, do you want to --4 VICE PRESIDENT MILLAR: Yes. It's Neil Millar 5 with the ISO. And that is also included in our transmission 6 7 planning analysis. 8 MR. YANG: Next question from Heather Hoff. 9 "What work and modeling is being done to evaluate shifting peak solar generation towards demand-side 10 11 loads that support our other clean energy goals, 12 hydrogen, desalination, et cetera?" 13 MR. ERNE: So we're preparing models to look at 14 that opportunity for the reports that we'll be doing next 15 year, as well as for SB 100, so we are developing those 16 models now. 17 MR. ERNE: I think we should cap it at that 18 point, alright, and move to public comment. 19 VICE CHAIR GUNDA: Yeah, just for those of you 20 whose questions were not answered, we'll try to do it. 21 We'll try to type an answer. And, you know, David Erne's 22 contact is there. 23 And I don't know, David, who else is the best 24 contact for us to continue to answer questions? 25 MR. ERNE: They can just forward it to me and

I'll distribute. 1 2 Alright, we'll start with the public comment 3 period. We're going to use the Zoom raise-hand feature. 4 We'll, first of all, start with those that are in the room, 5 and then we'll move to anyone who is on Zoom. If you're on 6 telephone, dial star nine to raise your hand, star six to 7 mute or unmute your phone line. You may also need to mute 8 your mute feature on your phone. When called upon, please 9 unmute your line and state and spell your name, identify 10 your organization, and then start your comments. 11 So first, I'll see if there any comments in the 12 room? No comments in the room. 13 So do we have any comments, Brian, online on 14 Zoom? 15 MR. SAMUELSON: Yes. We'll start with Boulder 16 Decarb. 17 You are available to talk. 18 MR. ERNE: We can't hear you. Have you unmuted 19 your line? 20 MR. SAMUELSON: Again, that was Boulder Decarb. 21 Alright, why don't we go to the next MR. ERNE: 22 one? And we can come back if that individuals available 23 speak. 24 MR. SAMUELSON: Alright, the next one is Robert 25 Budnitz.

1 You are able to talk. Please unmute yourself.

MR. BUDNITZ: I'm unmuted. Can you hear me?

MR. SAMUELSON: Yes.

MR. ERNE: Yes, we can hear you.

MR. BUDNITZ: Hi. This is not a question but it's a comment. Robert Budnitz. I live in Berkeley and work in Berkeley. I'm one of the three members of the State of California's Diablo Canyon Independent Safety Committee. They call the DCISC. For over 30 years, our DCISC Committee has been doing regular reviews and evaluations of the safety of the Diablo Canyon Power Plant. SB 846 provides an explicit rule for us, our Committee, to do such evaluations to support the purposes of the bill.

I cannot speak for the Committee talking like this, we only speak collegially, you know, after all of us work and vote and so on, so I'm just -- this is just my own view. But I want to tell the CEC and the other agencies that you're going to be writing various reports, and I want to make sure you know that that Diablo Canyon Independent Safety Committee is available as a state resource if issues or questions arise related to the safety of Diablo Canyon, okay?

Now everybody knows that if there wasn't a safety concern at Diablo Canyon, it wouldn't be controversial. I mean, it would just -- you know, I mean, that's why there's

so much controversy about it, and deservedly, because we all want it to be as safe as it needs to be.

And because of that, that's why our Committee has been established. And we're here as a resource for any state agency that wants us.

Thank you.

MR. ERNE: Thank you.

MR. SAMUELSON: Rick Brown, you are available to talk.

MR. BROWN: Thank you. Just following up on my question, our company, TerraVerde Energy, has been working with High-Speed Rail to develop the plan for using clean energy resources to run the train. And there's a lot of detail and a lot of data on the way, different scenarios, different ways that that's going to play out.

A key point I'd just make is that, you know, the train has the ability to slow down. And what I'm making — the point I'm making here is there are a lot of flex, there's going to be a lot of flexible resources, up and down the state with the high-speed rail. And it would be really important that, in thinking about these plans, you don't just look at look at through the lens of the load but, in fact, look at it through the availability of those flexible, distributed resources.

Thank you.

1 MR. ERNE: Thank you.

MR. SAMUELSON: Kate Unger, you're available to talk.

MS. UNGER: Hello. This is Kate Unger from the California Solar and Storage Association.

We are currently approaching 1 gigawatt of behind-the-meter storage in IOU territories already. And our initial estimates of deployment potential suggests that we can add 2 to 3 gigawatts more just between 2023 and 2026. This resource can come online faster than utility-scale and it offers 100 percent clean energy when charged from solar during the day, so it should be prioritized in this work and we hope that it will be.

And we also hope that the agencies will work to eliminate impediments, like restrictions on energy exported to the grid and baseline and metering issues, to enable the true reliability potential of this resource to be brought to bear for grid needs.

In particular, I heard from, earlier, a comment about wanting to avoid stranded assets and assets just being used for emergencies. It's important to consider and reexamine current approaches to baselines for demand-side programs, avoid customer use of resources on a daily basis from depressing the value and disincentivizing those resources participating in emergency response programs.

1 Thank you very much.

MR. SAMUELSON: Steven King, you are available to talk.

MR. KING: Hi. My name is Steven King and I'm representing Environment California. Thank you so much, CEC commissioners, for your time today.

So we strongly support this new renewable energy here in California as soon as possible. We know we have the tools and solutions at our fingertips to achieve a resilient and reliable electricity grid, while also staying on the path to 100 percent renewable energy. According to our recent Renewables on the Rise Report, California ranks number one for most small capacity, most battery storage — oh, sorry, I think I got muted for a moment there. So, yeah, California ranks number one for most solar capacity, most battery storage, and we know we need to keep this going.

With new funding and momentum from the Inflation Reduction Act at the federal level, there's never been a time to -- a better time to invest more in the crucial clean energy resources that Californians deserve. We know we need more solar power to capture the plentiful energy from the sun that reaches our rooftops every day. And investing in solar battery storage is just as important so Californians can save clean energy for later when they need

it the most.

Also, we really believe we need to focus on the low-hanging fruit in the form of energy conservation and efficiency. We know that the cleanest energy we have is the energy that we never use in the first place. And we know energy conservation can work. I can give just a quick example.

So our office building in Los Angeles is 34 storeys tall. And it was -- it's kind of an old building. It was built in the 1960s. But during the summer, when it's mostly empty, the climate controls are set to much colder than they should be. And the building's being cooled all day. We can't control the temperature inside our individual office. And I think that we could identify hundreds, if not thousands, of buildings that are doing the same thing across the state.

And with new state and federal resources, we can quickly help the state save hundreds, if not thousands, of megawatts of clean energy by looking for ways that we can just conserve the energy that we're already using that's already been wasted.

We look forward to working with you on programs to rapidly deploy solar and storage, and also to conserve energy across the state.

Thank you so much for your time and for your

1 collaboration. And I appreciate your efforts to make sure 2 we keep clean renewable energy growing for all 3 Californians. Thank you so much. 4 MR. SAMUELSON: Santa Lucia Chapter, you're 5 available to talk. MR. ERNE: Are you there? 6 7 MS. HARVEY: Hi. Thank you. I'm sorry, I was --8 this is Suzanne Harvey from the Santa Lucia Chapter of the 9 Sierra Club. 10 The Times reported on September 13th that 11 California just stared down its most extreme September heat 12 event in history and survived better than expected, thanks 13 in part to a new system of huge grid-connected batteries. The severity of the duration of this latest climate-driven 14 15 heat tested the state's electrical grid like never before. 16 In last June, the CPUC ordered utilities to procure 11,500 megawatts of new electricity resources by 17 18 2026, the equivalent of four large nuclear power plants, or 19 20 gas plants. California's batteries provided more power, 20 over 3,360 megawatts, than Diablo Canyon Nuclear Power Plant. 21 22 We want to applaud the CPUC for its efforts to 23 increase battery storage. As always, we're very concerned 24 about the risks of keeping Diablo Canyon open beyond

Its -- well, beyond any point in time now, and we urge you

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to direct these resources towards battery storage and other green energies, because their value is obvious in the most recent heat events that we've had and how we have survived those.

Thank you.

MR. ERNE: Okay, I think we have time for one more, then we'll move to close up public comment and go to adjourning comments for the morning.

MR. SAMUELSON: Patrick Welch, you're available to talk.

MR. WELCH: Hi. This is Patrick Welch with the California Municipal Utilities Association.

Just wanted to say, I thank the agencies for this initial public workshop that was passed by the legislature this year. And it's really helpful to the collaboration and how everything ties together. So just wanted to thank you for that. I look forward to more workshop opportunities like this and look forward to collaborating with you on a number of these relevant items in the municipal utilities. So thank you very much for holding this workshop.

MR. ERNE: Thank you very much.

We'll close up public comment at this point.

There will be more opportunity for public comment in the afternoon, so please join us in the afternoon.

1 Oh, there's one more? Oh, I'm sorry. There's 2 just one more, then we'll go forward with the last one. 3 Yeah, going back to Boulder MR. SAMUELSON: 4 Decarb, if you're there. You're on mute. If you can 5 unmute yourself? 6 UNIDENTIFIED MALE: Yes, I am. Thank you very 7 much for coming back to me. I appreciate it. I'll just read my comment real quickly. It has to do with the EIM 8 9 market. 10 There's up to two dozen utilities that are 11 expanding into the western energy imbalance market. 12 VICE CHAIR GUNDA: Can you please speak a little 13 bit louder, if you're able to? Thank you. 14 UNIDENTIFIED MALE: Sorry. 15 VICE CHAIR GUNDA: Or closer to the mic? Yeah. UNIDENTIFIED MALE: I will do that. 16 17 My comment is on the energy imbalance market. 18 There's about two dozen utilities that may expand into the 19 EIM western market by 2023. CAISO has drafted an extended 20 day-ahead market, in addition, for those entities, yet a 21 dozen of those utilities are leaning to SPP, including Tristate, G&T here in Colorado, which covers 4 states and 22 23 42 cooperatives. 24 Although participation may be allowed in both 25 CAISO and SPP, the California reliability imperative

1 suggests that additional creative ideas now, specifically 2 to support reliability, would be well timed. 3 I bring that up because I happen to be at a 4 session yesterday at Tristate. Thank you very much. 5 MR. ERNE: Thank you. VICE CHAIR GUNDA: Thank you. I just wanted to 6 7 make sure on the process, I think we transitioned from the 8 Q&A on the chat to the Q&A here. Do we want to bring up 9 just the public comment slide, just up, and make sure that 10 there is no other public comment before we close morning 11 session? 12 MR. ERNE: Oh, I'm sorry. 13 Yeah, can you forward the slide one more? 14 That's it. more. VICE CHAIR GUNDA: Yeah, just want to make sure 15 16 we ask for any public comment, if there's anybody else? 17 Once? Twice? I think we're good. Thank you. 18 MR. ERNE: Okay. Thank you. Any closing 19 comments for the morning, Vice Chair? 20 VICE CHAIR GUNDA: Yeah. No, I just wanted to 21 say thank you for all the, you know, speakers today. 22 And, Lisa, excellent job summarizing it. 23 Ted and Pete, thank you so much for both kind of 24 providing the information and taking the time to be

available to answer questions.

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And, David, thank you to you for your leadership. 1 2 And it's been -- I mean, we need a central person pulling 3 all these things together, so thank you so much for all the 4 work you're doing. 5 I look forward to the second panel today. And thanks for all the colleagues on the dais and for everybody 6 7 who attended this morning, and the questions and comments. 8 Thank you. 9 Thank you, Vice Chair. MR. ERNE: 10 And a reminder to those who are on Zoom, we'll be 11 resuming at 1:30. And there's a different Zoom link for 12 the 1:30 afternoon session, so please make sure you join at 13 that one. And we'll see everybody back in here at 1:30. 14 Thank you. 15 (Off the record at 12:09 p.m.) 16 17 18 19 20 21 22 23 24

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CERTIFICATE OF REPORTER

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

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

IN WITNESS WHEREOF, I have hereunto set my hand this 8th day of November, 2022.

MARTHA L. NELSON, CERT**367

Martha L. Nelson

CERTIFICATE OF TRANSCRIBER

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

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

I certify that the foregoing is a correct transcript, to the best of my ability, from the electronic sound recording of the proceedings in the above-entitled matter.

MARTHA L. NELSON, CERT**367

Martha L. Nelson

November 8,2022