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CALIFORNIA ENERGY COMMISSION

COMISSIONER WORKSHOP

In the matter of,	)	Docket No. 17-MISC-01
	)	
Workshop on AB 525	)	RE: Offshore Wind
Strategic plan	)	

REMOTE VIA ZOOM VIRTUAL MEETING

THURSDAY, MARCH 3, 2022

1:00 P.M.

Reported By:
Martha Nelson

APPEARANCES

CEC Commissioners & Staff

Karen Douglas, Commissioner
David Hochschild, Chair
Siva Gunda, Vice Chair
Jim Bartridge
Eli Harland
Rhetta deMesa
Scott Flint

Public Utilities Commission

Alice Reynolds, President
Clifford Rechtschaffen, Commissioner
Darcie Houck, Commissioner
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California Coastal Commission

Kate Huckelbridge, Deputy Director of Energy, Ocean Resources, & Federal Consistency

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Necy Sumait

Public Comments

Manley McNinch, Southwest Regional Council of Carpenters, Local 805

Adam Stern, Offshore Wind California

Gary Latshaw

Anthony Ventura, Southwest Regional Council of Carpenters, Local 805

Nancy Rader, California Wind Energy Association

Sarah Xu, Brightline Defense

Natalie Nax, Ceres

Ben Grundy, Environment California

LorryAnn Velez, Barbareño Band of Chumash Indians

Annie Seacrest, County of San Luis Obispo

Matthew Marshall, Redwood Coast Energy Authority

Varner Seaman, American Clean Power Association, California

Nancy Kirschner, Business Network for Offshore Wind

Molly Croll, Avangrid Renewables

Rachel Koss, Coalition of California Utilities Employees

INDEX

P R O C E E D I N G S

March 3, 2022 1:02 P.M.

MR. BARTRIDGE: Well good afternoon, everyone. I'm JB with the Energy Commission's Siting, Transmission, and Environmental Protection division. Welcome to today's workshop focused on Assembly Bill 525 and developing a strategic plan for offshore wind energy planning goals in California. Today we'll explore the AB525 requirements that direct the energy commission to evaluate and quantify the maximum feasible capacity of offshore wind in California and establish offshore wind planning goals for 2030 and 2045. We'll also hear from the Bureau of Ocean Energy Management, or BOEM, on their California leasing activities.

Please note that to make the Energy Commission's workshop more accessible, Zoom closed captioning has been enabled. Attendees can use the service by clicking on the live transcript icon, and then choosing either show subtitle, or view full transcript.

The closed captioning service can be stopped by exiting out of the live transcript or selecting the hide subtitle icon. Closed captioning cannot be exited by phone.

Next slide please.

Okay, in today's workshop we'll start with

opening remarks from agency leadership. We'll then hear State Agency updates on recent California offshore wind activities by Eli Harland from the Energy Commission. Following Eli, the Bureau of Ocean Energy Management or BOEM, will give a presentation on the Federal wind leasing activities in California.

And finally, we'll close out the afternoon with CEC staff presenting on AB525 and the approach for setting offshore wind planning goals. Before we get started, let's take care of some administrative matters. Please be advised that while CPUC Commissioners are present at the workshop, the PUC's rules governing ex party contacts with Commissioners and their staff remain in effect, even though this is a CEC initiated and noticed workshop.

We are gathering fully remote consistent with Assembly Bill 361 as extended by Governor Newsome's executive order N122. This meeting is being recorded, and the link to this recording will be posted on the Energy Commission's website.

We have also enabled the Zoom closed captioning, we'll put instructions about how to use it in the chat. There will be opportunities for public comment throughout the afternoon, and we're using the raised hand feature and will provide instructions for public

comment at that time.

So with that, I'll ask agency leadership to turn on their cameras, and I'll turn it over to Commissioner Douglas and others for opening remarks.

COMMISSIONER DOUGLAS: All right, well, thank you so much, Jim. Good afternoon everybody, and welcome to the Energy Commission's workshop on Assembly Bill 525, Strategic Plan for Offshore Wind Energy Goals. And on other topical offshore wind topics that that we're going to cover today.

I'm joined — I'm a Commissioner at the California Energy Commission, I've been taking point on offshore wind, with the great partnership and collaboration of many state agencies, commissions, and departments over the last couple years and I'm pleased to be joined today by a very distinguished panel of some of our agency partners, and on the virtual dais.

This a really exciting time for offshore wind in California. It's also a very busy time for California agencies, stakeholders, and really all interested parties in offshore wind. There's been a tremendous amount of inter-agency collaboration around many key activities that are going forward in parallel timeframes.

Today we have a primary focus on AB 525, it's

specifically the first deliverable under that bill, which is the proposal and adoption by June 1 of this year of a set of targets for the strategic plan on offshore wind. But we are also going to be — we've also asked the Bureau of Ocean Energy Management to provide an update on their California activities with respect to leasing.

And, um, because of these parallel processes with the BOEM process, and the state's planning work for offshore wind, we have opened up and invite — opened up the docket and invited the public to submit comment on not only the strategic plan, but anything additional related to the more immediate leasing processes.

So we definitely invite and welcome comments on all of the topics that we're covering today, and um, just in close on my opening comments, I want to highlight and acknowledge the staff that has worked on making this workshop possible. The team and the Energy Commission STEP Division, Rhetta deMesa, Scott Flint, Jim Bartridge, Eric and Erica Brand, the Planning Office team and – and most definitely my advisors who put in some very late hours to help get everything ready. The CPUC team Neil Raffan, David Withrow and – and broadly the IRB team at the CPUC. Our agency partners at Ocean Protection Councils, the CDFW State Lands Commission,

Coastal Commission, Office of the Planning and Research, the Workforce Development Board, and the Labor Agency, among others.

Lastly, I just wanted to highlight — there are new developments, seems almost every minute in the offshore wind space and certainly last week when we watched the New York Bight auction results come in. That raised a lot of questions and raised a lot of thoughts and considerations for us and I just want to emphasize the importance to everybody, of understanding the California market context, the California infrastructure needs, in terms of this new industry and, finding ways the ways that we can to ensure that projects are able to be competitive in the California market, while providing some of the many and important values that offshore wind can provide in California.

And I don't know if any of my colleagues have additional thoughts on that, but we certainly again welcome comments on that topic as well. And – and so with that, I will turn this over to my colleagues for any opening remarks that they'd like to make, and let me just quickly see if the Chair, I think he's going to join at some point, but Chair Hochschild are you on right now?

Alright let me pass it then to CEC commissioner

Siva Gunda.

COMMISSIONER GUNDA: Thank you Commissioner Douglas, thanks for the opportunity to join this workshop. You've set it up really well, I just want to thank all the colleagues and the dais and all of the staff for pulling this together.

Just as a weird background, as we go into this workshop, I just wanted to remind for ah the SB 100 work that you know the joint agencies have done and published last year, the report the offshore wind capacity that was allowed as a candidate resource with approximately 10 gigs, and even in the core scenario of 10 gigs of the offshore wind was selected based on the cost curves and the generation profiles that were assumed in the previous report.

So just wanted to share that you know offshore wind is an important element of the resource mix as we think through the SB 100 lens. And even under you know, the current RPS in a counterfactual case of 60% RPS by 2030 and then you keep that, feed that till 2045, you still need offshore wind and approximately six gigs of that to even make that happen.

So, just really excited about this progress, and Commissioner Douglass thank you for your leadership in this space, and look forward to listening to the

workshop and learning. Thank you.

COMMISSIONER DOUGLAS: Thank you so much, thanks for being here. Moving on to the CPUC, I first wanted to invite Commissioner Rechtschaffen whose, who leads the IRP at the CPUC, if you'd like to make any opening comments?

COMMISSIONER RECHSCHAFFEN: Thank you comm- (clears throat)thank you Commissioner Douglas, and thank you very much your leadership, on this. It's been extraordinary. I agree with you, it's a very exciting time. Things are moving fast and that's generally that's very, very good, they're moving in the right direction.

We've had an unprecedented level of interagency coordination, which is great, and necessary, cause there's a lot of moving parts here. We've been working through our IRP process to incorporate offshore wind. I won't repeat what we've said at other workshops. I do want to know, we had a half day workshop just laying out sort of the road map for what we need to do with the PUC to make sure that offshore wind is fully incorporated in our processes.

We have a proposed decision that we issued last month, in which we included a preferred system plan that had about 1.7 gigawatts of offshore wind online by 2032.

That's not a procurement mandate, that's just a planning exercise, very important step forward. We've also asked the CAISO to evaluate the transmission necessary to serve 8 gigawatts of — of offshore wind into our system.

So we're certainly moving forward. We absolutely need to maintain our focus on doing this at reasonable cost, and the IRP process is a technology neutral process, it searches for least cost solutions. When we model cost we include estimates in different scenarios about the costs of leases, and we'll continue to study that and, you know, what lease costs are most realistic for California.

But even more importantly, we have a competitive bidding process to make sure that whatever resources are selected, are competitive. Resources compete against each other, both off shore and within that category, and more generally.

And for the portion of the load serving entities that we regulate most directly, we have to approve long term contracts for any renewable resources. So we definitely have ways to make sure that costs remain competitive. We've talked about going forward, whether or not we need to require procurement from a central procurement entity, given the nature of these resources, how large they are, the long lead time involved, and

whether that could make the process more efficient but also more cost effective. So that's something that we continue to consider.

And of course we all hope that costs will continue to decline as technology advances and as the market matures. We're not necessarily the first leader here, as we are in so many other technologies, and that may be a good thing. Maybe it be a benefit from cost declines on the East Coast or in Europe.

I look forward to the discussion today, thanks for the chance to give some of those friendly comments.

COMMISSIONER DOUGLASS: Thank you so much, Commissioner Rechtschaffen, and thanks for the great work the PUC has been doing in this space. It's been great to partner together on some of it.

Let me now ask President Reynolds and then Commissioner Reynolds and then Commissioner Houck, to speak in that order, if you could.

PRESIDENT REYNOLDS: Thank you Commissioner Douglas. I will just keep it brief as Commissioner Rechtschaffen covered the issues from the CPUC perspective very well.

I just really wanted to welcome participants to the workshop today and note that I'm really pleased to be here and recognize the collaboration between the CPUC

and the CEC as well as the Natural Resources Agency and just express my gratitude for everyone's hard work. I think that partnership is just really critical for this work going forward. And also wanted to note that we have an extraordinary Federal-State partnership on offshore wind, and I'm looking forward to continued — continuing to support that and participate in that partnership (indiscernible) for offshore wind strategies.

And with that I will just say that I'm really looking forward to the dialogue today. Thank you.

COMMISSIONER DOUGLAS: Thanks so much. Commissioner Reynolds?

COMMISSIONER REYNOLDS: Thank you Commissioner Douglas. And I (indiscernible) lots of my colleagues, and thanks for the invitation to this forum. Really appreciate the focus and the opportunity to learn more about the subject. It's clear that this is a big fast moving area, not unlike the wind turbines themselves. The CEC and we ourselves have a lot of work ahead of ourselves by June of this year, and June of the following year. We look forward to you know seeing the developments in this area, and really appreciate the coordination of our staff on this subject. Would also like to note that while some of the criteria here lie

outside of the CPUC's wheelhouse, we've learned a lot over the last few years about tribal engagement, about planning while incorporating environmental impacts, and other topics. So please don't hesitate to reach out for the support of our staff. Really appreciate the ongoing collaboration between our agencies.

Now (indiscernible) just briefly my schedule today prevents me staying for the whole workshop but I really look forward to the discussion today and will be briefed by my advisors and my staff on those portions that I miss.

COMMISSIONER DOUGLAS: Yeah thanks so much. Thanks for being here. We'll go to Kate Huckelbridge.

COMMISSIONER HOUCK: Oh —

COMMISSIONER DOUGLAS: Oh and Kate by the way, oh oh I'm so sorry, Commissioner Houck.

COMMISSIONER HOUCK: Thank you Commissioner Douglass. I just want to recognize your leadership on this important issue and on all the work that the CEC has done in coordination with other agencies, especially the collaboration between our staffs at the PUC and the CEC, the work that President Reynolds has done in her former role in the Governor's office on this important issue and the leadership that Commissioner Rechtschaffen has taken at the PUC, and the important role the Coastal

Commission and the California Ocean Protection Council have in moving this forward.

I know that there is a lot of stakeholder interest and I know we've had discussions about that, particularly the tribal interest in this topic, and I welcome feedback from communities and tribes on how these projects can impact them and help us meet our SB 100 goals, and look forward to the discussion today.

COMMISSIONER DOUGLAS: Yeah thank you Commissioner Houck. We've had some great conversations about tribal outreach around us and community engagement and thank you for bringing up the California Coastal Commission and the Ocean Protection Council. So we'll go to Kate Hucklebridge bridge next.

Go ahead, Kate.

DEPUTY DIRECTOR HUCKELBRIDGE: Thanks Commissioner Douglas. I just first want to echo my colleagues' appreciation for your leadership on this topic. It's been important and also recognizing the partnership among all the agencies at the state and the federal government. It's been pretty extraordinary from our perspective.

I think the commission, the Coastal Commission, comes to this work thinking about how to plan for offshore wind in a responsible and thoughtful way that

protects our coastal resources. And I have appreciated the kind of group effort to keep those goals in mind as we're you know, thinking through, um, the state's energy goals at the same time.

So, um, with that I appreciate being included today and I really look forward to the conversation and the public comment.

Thank you.

COMMISSIONER DOUGLAS: Thank you for being here. And now, Mark Gold.

MR. GOLD: Hi, I'm Mark Gold. I'm executive director of the Ocean Protection Council, as well as Deputy Secretary for Coast and Ocean Policy for the Natural Resources Agency, and a Coastal Commission member. So covering a few bases here. And, look everybody Karen has thanked you a lot and justifiably so. On I can tell you, I have not had the privilege of working on anything that is this important and this controversial, that has included so much cooperation between multiple agencies. It has really been a joy to go through this even though we understand, that California demands for us to move forward on SB 100 as quickly as possible, but also doing it in a way that's as environmentally responsible as possible.

So that means protection of marine life. And

that means protection of our fisheries. That means protection of our cultural resources. And so the fact that we're talking about this today in a manner where we're talking about floating offshore wind, and doing this in a way that really has not been done at the scope and scale anywhere else in the entire world, and taking into consideration some of the environmental impacts in a manner that also has not, been taken into consideration anywhere else in the world.

That's who California is. You know, is we do things differently, and we try to set the bar and that's what's happening here. And so I know people who are here, have a number of different questions here. I'm really looking forward to hear what people's comments are. But you have our word that everything that we've been doing from a scientific perspective, to provide information to Kate Huckelbridge and her colleagues at the Coastal Commission for the consistency determination that's going to occur in the next few months on — on the two lease sale areas. All of that science is going to be absolutely instrumental in in us moving forward on AB 525 and doing the planning necessary to meet these — and develop and meet these ambitious targets for the state of California.

So, thank you.

COMMISSIONER DOUGLAS: Thank you, Mark, and thanks for bringing us really around to the point, you know we've all been working so hard collaboratively on this because offshore wind is this great opportunity to help us meet our — help address our climate goals, our renewable energy needs, and to do it in a way that's consistent with the values that we've held up in the state around environmental protections and sustainability, around understanding how the projects can support workforce, and community, and understanding the kind of community engagement that's needed to really get buy-in and really work through issues and impacts, particularly to some of our more affected stakeholders like the fishing industry, among others.

And so I think we've all collectively really brought that ethic together and I've — I've, it's been a pleasure working with everyone in that capacity. And so thank you. And with that I think, Jim, I'll turn this back to you to start getting into the agenda.

MR. BARTRIDGE: Very good. Thank you — thank you, Commissioners, for all your opening remarks. With that, let's welcome our first speaker, Eli Harland from the Energy Commission. He'll provide some brief updates on California offshore wind activities. Eli?

MR. HARLAND: Good afternoon. My name is Eli

Harland. I work at the California Energy Commission. Currently an advisor to Commissioner Douglas, and support her and her broad portfolio, and have been very focused on supporting her role with offshore wind, including outreach and planning processes, and in our coordinating role, with state agency partners.

So next slide please Erica.

So today I wanted to kick off this workshop by sharing an update on the various interrelated tracks that are occurring at state agencies. You'll hear more about some of these during the presentation from the Bureau of Ocean Energy Management, as well as the Energy Commission, later in the agenda today.

So I won't go into great detail on these. But I wanted to make sure and just emphasize this level of coordination we have going and how these work streams relate to one another. This isn't really meant to be a comprehensive overview of these, but these are the key work streams that are driving the schedule of activities for this year, and — and the years after that.

We're trying to look at all of this really strategically so that we can leverage opportunities to maximize participation and also flows of information between the work to me, the Assembly Bill 525 requirements, as well as the BOEM process. I do want to

emphasize at the top that AB 525, or Assembly Bill 525, is clear in Public Resources Code section 2599182 that the development of the strategic plan shall incorporate but not delay progress to advance responsible development of offshore wind and other relevant policy venues.

So that's one thing we're taking to heart, is seeing the variety of things that we have going in parallel and making sure that we stay on schedule and — and maximize like I said the participation and flow of information. So I'm not going to go into great detail about AB 525, because Rhetta deMesa later in this workshop will be providing a really detailed overview of the legislation but especially as it relates to some of our most immediate deliverables that are required by June 1 of this year.

Also, unrelated to the strategic plan requirements, the state continues to work through the BOEM process, the planning and leasing process. You'll also hear more about that process from Necy Sumait from BOEM following this presentation, but I wanted the team the interagency state team that's working on this is reviewed and provided comment into BOEM on their National Environmental Policy Act analyses for both the Morro Bay and the Humboldt wind energy areas. And we'll

continue to do that and review and engage in those environmental reviews.

We're also looking closely and engaging in BOEM's approach and format for the lease option for both of those wind energy areas. This will really mean taking our collective learnings from the wide range of outreach we have done over the years, and also in coordination with our key agencies to really lean into that BOEM process to reflect California priorities, with eyes wide open about what BOEM can and can't do in their leasing, under its interpretation of the Outer Continental Shelf Lands Act and other federal authorities.

And we're very interested today in reactions from our workshop participants and comments into the CEC docket following the BOEM presentation.

Related to the BOEM process is the Coastal Commission's review of BOEM's consistency determination for leasing areas offshore California. Coastal Commission staff and working with key state agencies, I think Kate just highlighted this, is in the process of — of that review now and preparing a staff report for the Humboldt winergy area —— Wind Energy Area —— with a goal of having a report out for public comment ahead of an April Coastal Commission hearing.

This is a fast timeline, and it is occurring while we are also balancing the workload to complete the analyses for the most immediate requirements of AB 525. This consistency review is one of the first regulatory opportunities for California under the Coastal Zone Management Act to set a direction for leasing in California that reflects the state's coastal and ocean laws and policies that I think is, as Mark Gold highlighted, are our values.

So the link that's on the web, that's on the slide here, is to the Coastal Commission's website where you can find additional information on the Coastal Commission's review for the Humboldt winerg —— Wind Energy Area —— consistency determination.

Also, Commissioner Rechtschaffen highlighted that the Public Utilities Commission is really been ramping (indiscernible), and last year, requested the California Independent System Operator to study transmission for large amounts of offshore wind for informational purposes. And the — the California ISO, currently has a draft transmission plan and a 20 year transmission outlook that is in public preview

And through this energy Commission's and the Public Utility Commission's efforts to stand the Senate Bill 100 resource build process, the CEC has also been

providing input into the Independent System Operator's transmission planning process.

You'll hear more about a lot of these studies later in Rhetta's presentation, including information on the recently approved decision from the CPUC that includes a gigawatt scale of offshore wind in their planning portfolio.

Another related track that we're working on is implementing allocations from the 2021-2022 state budget. Some of these allocations have already been put into play to bring staff on that are contributing to the state's activities related to the BOEM planning and leasing process. In addition to bringing on staff, the Ocean Protection Council has made investments into bolsting — bolstering our environmental information as well as our tribal cultural information and helping the Coastal Commission synthesize this information to support the review of BOEM's consistency determination. And we're also looking at the allocation received for supporting outreach, and where to strategically direct those funds to bolster stakeholder and tribal engagement.

The budget last year also allocated funding for technical analyses. And one of those will be an assessment that the State Lands Commission will be doing

that will look regionally at opportunities, and feasibility of alternatives to using existing port and waterfront facilities. You'll hear more about the formulated spending and some of the information that has been put together that Rhetta will share in her presentation later.

I also wanted to highlight, I won't spend a lot of time discussing though, is the Governor's proposed budget for 22-23. As part of the clean energy package, 45 million is proposed to support planning and engineering design at existing port and waterfront facilities, as well as a request for resources in that budget to support an interagency approach to meeting the requirements of Assembly Bill 525.

The budget proposal is being considered by the legislature and the agencies will be engaged in presenting and responding to that proposal. We won't know until after the Budget Act is passed where we stand with these proposals. So those are some of the key activities occurring at the state agencies.

The next two presentations will provide a lot more detail about the immediate BOEM process and requirements of AB 525. As was mentioned it's exciting times for us offshore wind, but it's also an important time to make sure we're doing this at a pace that meets

the climate imper — imperative, but also doesn't sacrifice our coastal ocean values and brings stakeholder and tribal voices into this process.

In a way the requirements of AB 525 and the schedule that is set by those requirements can really allow us to ledger — leverage the strategic planning work into the BOEM process, and the BOEM process into the AB 525 process. Keeping in mind that working on AB 525 is not meant to slow things down in any other venues but is —— is designed to have information flows between them.

So I want to say thank you to Necy, from BOEM, for being here to present today, and allowing this opportunity for public input into that BOEM process. I also want to acknowledge Rhetta deMesa and Scott Flint and the rest of the CEC team as well as our interagency partners for their focus on making this workshop a success.

Our docket is open, there should be a links in the workshop materials. And the docket's always been open, and I expect that it'll become much richer with information following this workshop and I look forward to hearing comments today and reviewing written comments.

Last, I just want to highlight that we have over

250 participants logged in and I can see that we have folks from a lot of different perspectives and it really shows the versed interest in this topic.

So thank you to everybody for participating today. And with that, I'll turn it back over to Jim Bartridge.

MR. BARTRIDGE: Thanks Eli. Okay, our next speaker is Necy Sumait, from BOEM, who will provide an update on the federal leasing process for wind energy areas in California.

Necy?

MS. SUMAIT: Thank you, Jim, and good afternoon, everyone. Thank you for providing BOEM this opportunity to be apart of this conversation and to provide an, (indiscernible), some status and updates on what we are doing here in in California with regards to offshore wind.

I'm — my name is Necy Sumait and I'm the regional supervisor of the Office of Strategic Resources for the Pacific region. And one of the the responsibilities that I have is to lead the leasing process for renewable energy off of the Pacific coast, which includes California, Oregon, Washington, and Hawaii.

You heard the extraordinary collaboration among

state agencies and I want to say from BOEM's perspective, it has really been a wonderful opportunity to work with state agencies under the leadership of Commissioner Douglas and her advisors and the Energy Commission staff and in the various agencies that we have worked with, the OPC, Coastal Commission, California Public Utilities Commission, State Lands, California Department of Fish and Game.

I think everyone has touched this process in one way or the other, and so we're just really grateful to have that very open conversation and collaboration with the state, and we hope and look forward to continuing that as as we move forward with our leasing process.

So just maybe a little bit about, you know BOEM is organized according to regions. So as I said, we are the Pacific region. We don't yet have any leases like our Atlantic colleagues. Where, you know, they've had several leases there, including the most recent one in New York. Here in the Pacific in addition to the leasing section, we also have the environmental section, and so we have folks that will look through the environmental assessment, there's a section for that, and we also have a very robust studies program. And so that has enabled us to — to be able to fund studies that inform our decision-making process.

So if we can go to the next slide, please.

UNIDENTIFIED SPEAKER: (indiscernible).

MS. SUMAIT: Next slide.

So today I was asked to provide a brief overview of the BOEM leasing process, to talk about our status here in California, and what next steps we can look forward to towards the lease sale. Talk a little bit about where in that process there are opportunities for input and engagement. Talk a little bit about lease option formats, and previous approaches that, we have used in previous leases off of the Atlantic.

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So some of you are familiar with this with this slide, and I won't go through each one of them. Just to say though, that you know, the BOEM process is a long one and it's in four distinct phases in California and most, and, here in the Pacific, including Oregon. We're in this first phase of planning and analysis, and which will ultimately, go into the next step step hopefully soon in California, which is the leasing process. And once there's a lessee the lessee then has a little bit of a control in terms of how quickly the development goes through because then there would be a term during the —— the after the leasing process in which they will do additional site characterization and site assessment

to inform the development or the construction and operations plan of the actual project that they plan to —— to build on the leasehold.

This process includes multiple opportunities for public engagement, we do our intergovernmental coordination through the Renewable Energy Task Force that's composed of local, state, and federal agencies, and elected officials. And we also have those taskforce meetings are always open to the public. We have engagement with our tribal partners, other state agencies and like webinars, we have public webinars, and there are also going to be Federal Register notices for the more formal part of the process.

In this four phase process, there are two points in which we do an — address environmental analysis under NEPA, the National Environmental Policy Act. The first is prior to the issuance. And so the scope of that NEPA review is really the types of activities that a lessee can do once they have a lease, which is simply to do some additional site characterization and site assessment work. And since the lease does not provide the authority to — to construct a project. And only when we have the construction and operations plan, would we have the information to conduct a full environmental assessment, typically an EIS.

Next slide please.

So after multiple years of planning, I think beginning in 2016, we have what we call wind energy areas on the central and north coast. So we're currently — activities are focused in the Humboldt area. This is the Humboldt Wind Energy Area. And the nomenclature there is a Wind Energy Area is that area that is determined after there is a call area on which information and nominations were sought, and the wind energy area is the area on which we are conducting the environmental assessment for potential lease issuance.

So the Humboldt Wind Energy Area environmental assessment draft is out. We did close the public comment period there on February 10 of 2022. And so the next step on the Humboldt Wind Energy Area is to complete the environmental assessment.

Next slide, please.

The Central Coast is lagging a little bit. We did determine a Wind Energy Area off Morro Bay. And we have conducted a scoping period to prepare that environmental assessment, and so the next step here for —— for Morro Bay is to release the Draft Environmental Assessment for public review and comment.

Next slide.

So after environmental assessments are in place,

you know we — we begin to move into the leasing process of that four phase process. So the leasing process begins with the publication of what we call, it's a Federal Register Notice Proposed Sale Notice. And our goal is that, whereas Humboldt and Morro Bay are proceeding on different tracks right now, is that we would combine them into one proposed sale notice to hold one single auction for —— for California.

That Proposed Sale Notice will be out for a 60 day comment review. And it will also be the last opportunity for potential bidders to submit qualifications to bid. And after that comment period is out, we review and publish a final sale notice and then eventually a lease auction in the fall of 2022.

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So just a little bit more about those steps, post — beginning with the proposed sale notice. So in the Proposed Sale Notice this is the first time that we will identify areas proposed for leasing. So we'll actually identify areas on the — off the Morro Bay as well as Humboldt that we propose for leasing. We will also describe the proposed auction methodology. As I said earlier, this will be the last time where potential bidders can submit qualifications. A bidder has to be qualified legally, financially, and technically in order

to — to qualify to bid in any of our auctions.

And as I said earlier, we plan to put this out for a 60 day comment period for stakeholder input. And sometime during the comment period, we'll hold an auction seminar and just get everyone familiar about how, you know the auction process will —will be going.

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So when when the proposed notice is out we are looking for you know inputs from stakeholders, and basically it's you know — and anything that's on the on the document — but you know anything that's related to the lease sale, we're going to put in the number of lease areas, the sizes, the orientation, the delineation of the proposed lease areas. So any comments on that would be helpful. If there are comments on project layout considerations that we should account for, or that people would like to suggest, that would be good.

The proposal notice will also come with a proposed lease document. The lease document won't be in the Federal Register, but it will be published on our website at the same time that the proposed sale notice is published. So any comments on proposed lease stipulations, that would also be helpful to us. And of course, it's in the proposal notice that we're going to describe the type of auction format that we are

proposing to have in California.

Next slide please.

So please provisions and conditions in — in a PSN. That may be in a PSN. So we have really tried to, most of our lease, our lease or lease are really like more or less forms, adapted for, you know, any kind of requirement for region specificity. So, but I, for the most part, folks can rely on some of the lease provisions that are out there for previous leases. And so, some of the things that we have asked lessees to do, are to prepare various communications plan, like a fisheries liaison and fisheries communication plan. And we've also become sort of more granular in describing what these plans should look like, you know, just based on our experience and what we're hearing from folks. So, it's — it's starting to define, as I think you've seen in the New York lease, that, you know, there's more specificity on what we intend those plans to be, and to give the lessees further direction on the expectations.

So, we've — in the New York Police, there's also a Native American tribes communication plan. And then like an agency plan, communication plan, this agency communication plan is really like, you know, there are going to be all sorts of agencies at different levels that will be involved and so we would look to the lessee

to provide, you know, how those are are aligning and give a status of where things are just so we can see how the the development is moving forward. Of course, there will be protected species considerations and that will be among the lease provisions and potential stipulations.

Any comments on like the site characterization requirements? There's requirements for like pre survey meeting, survey plans submittals, progress report — reporting and how when they do this, how the various stakeholders are involved. So you know, there's some requirements on the on that and previous ones.

We've also more recently put in like workforce considerations for construction in, and leases that have either been proposed, like in the Carolina Long Bay, or the most recent one in New York. And of course, as I said before financial assurance. I mean, prior to any steel in the water, the lessee would have to provide financial assurance for decommissioning, but there are also financial assurance requirements for performance on the lease. So, there are different levels of financial assurance and all of that will be, delineated in the in the PSN and in the lease as attachment to the PSN. And of course the lease terms.

It — it's usually like a one year preliminary

term to basically submit that that SAP, or site assessment plan, and then they would have like five years to put together a construction operations plan. And then I believe for cons— for operations we're up to like 33 years.

Next slide please.

So, after the PSN is out and we receive comments, we will follow that with a final sale notice. The final sale notice has to be out at least 30 days prior to an auction. So you know that's the minimum requirement that we need to have. And in the PSN — the FSM, this is where we're going to have the specific dates for the next steps that that will happen prior to the auction.

We're going to — we're going to specify the final areas for the lease. Obviously, the final auction format for the lease sale and then any changes from the PSN to the FSN. We will also provide a list of the eligible bidders. You know, obviously they don't all have to participate but those are the ones that that are qualifying. Whoever would be listed in the FSN.

Next slide please.

So when one of the the few things that you still need to do that will be delineated in the final sale notice would be you know, fill out additional forms like

there's a bidder financial form in which the bidder would have to list all of their affiliations cause they're not allowed, an affiliate cannot bid, you know, they obviously cannot bid against each other. So we — we need to understand that and know that. This BFF or Bidder Financial Form will also designate our, the person or the contact for the bidders. There's going to be a bid deposit that's going to have to be paid for all the bidders to participate. And those are — the qualified bidders will be asked to join a mock auction. And then finally of course, we have the live auction.

Next slide please.

After the auction it's not over yet. We do declare a provisional winner. I think you've seen that in the last one. And then it will have to go through the auction process we have to go through the Department of Justice review, that's about 30 days. Just to make sure there's no an— antitrust law violation. And then we send a lease to the winner, and they have like 10 days to pay the balance of the bonus bid, which is really the final bid minus the deposit. They have to agree to the terms of the lease. They have to file their financial assurance form. And then they sign the lease, and then everything, if everything is well and good, then BOEM signs the lease.

Next slide.

Just a slider here on the New York, the type of auction format. So New York utilized an ascending bidding auction and cash was the only bid variable. You — you know, you saw that we started with a minimum bid for each of the leas area, and then incrementally, those bid, the prices goes up. And then, um, when only one bidder remains and that's a declared winner. And I believe the New York Bight auction went for three days, and 64 rounds during those that three day period. So it was a very active auction process that we just held.

Next slide.

So — so that was a a single factor bid process. So the Carolina Long Bay, and this is only from the proposed sale notice that was published. We have not yet submit — we have not yet published a final sale notice. So there could be some changes going forward. But just based on the proposed sale notice, wanted to just say that the intent there is to have a multi factor bidding auction. In this case, it would include not only the monetary factor, but a non monetary part of the the bid. And basically the bidders bid will represent the total of the bidding credit and the — the cash amount.

The proposal there is to have bidding credits to

allow bidders to receive a credit of up to 20% from their bid in exchange for fis — financial commitments to two things, like a workforce training program and there's some examples on what might qualify those in in PSN, or development of a domestic supply chain. So my, all right, this is to allow all the bidders to have equal opportunity to commit to a finite — financial amount based on these qualified programs. And so everyone will have a shot at having access to this bidding credit.

And, you know, we — we when we do have the auction, we, you know there's going to be a minimum bid. And like the single factor, the price just keeps going up until there's only one bidder left.

This might be my last slide, I think. Oh, maybe not.

So, after we do have a lessee this is just the rest of the process as I talked about in that four step. Lessee can only do plans, submit plans, do some site characterization and get the information for them to submit a construction operations plan, and then we review the construction operations plan, do the environmental analysis under NEPA. Typically, you know you expect it to be an EIS.

We review the COP, they als — and then after

that process is done then there's still just a couple of of forms, or a couple other reports that they need to provide, like the design and installation plan, before they can actually start to have steel into water. So it's a long process. We're slowly moving through the four phase process here in California. And the goal and the target is to look forward to a lease sale by this fall. All of this year. So I do think this is my last slide.

Great. My contact information is there. In addition to myself, Jean Thurston-Keller is our California State Coordinator, so she is also a good contact for California questions. So thanks for the opportunity to — to be a part of this conversation and, I guess happy to stay if there are going to be any questions. Thanks.

MR. BARTRIDGE: Thank you, Necy, for that comprehensive overview. Let me ask, do folks, anyone on the dais have questions or comments for Necy, and if so please turn on your video.

(PAUSE)

Seeing none. Okay, one more call from the dais? Anyone? Okay.

Necy, thank you again. With that, I think before we go to the next presentation, let's take a

quick five minute break. Or eight minute break. We'll come back at two o'clock, and start on the next presentation from staff.

(PAUSE)

Okay, good afternoon, everyone. Welcome back. It's two o'clock. We're ready to get started on the next presentation today. Just make sure that folks are with us. I'll, let me now invite Rhetta deMesa and Scott Flint. Please turn on your cameras, and Rhet —— Rheta will be presenting on the requirements of Assembly Bill 525, and some of our thinking around establishing California's offshore wind planning goals. So Rhetta, take it away.

MS. deMESA: Thanks, Jim. Good afternoon, everyone. I'm Rhetta deMesa with the Energy Commission Siting Transmission and Environmental Protection Division, where I focus on offshore wind. As we just heard from Necy, BOEM, in collaboration with all levels of government, stakeholders, and tribes, has been planning for leasing areas for wind energy in federal waters offshore California. And as summarized in the opening presentation by Eli, there are many interrelated tracks occurring in state agencies that relate to wind energy offshore California, including efforts and actions relating to the BOEM's planning and leasing

activities.

One of the major activities the CEC is undertaking as required by AB 525 is evaluating and quantifying the maximum feasible capacity of offshore wind to achieve reliability, ratepayer, employment, and decarbonization benefits, and developing a strategic plan for offshore wind energy which has many statutory requirements, including establishing megawatt planning goals for offshore wind energy.

Slide please.

California Assembly 5 —— Bill 525 became effective January first of this year. AB 525 sets the analytical framework for offshore wind energy development off the California coast and federal waters. In enacting AB 525, the legislature found and declared among other things, that if developed and deployed at scale, the deployment of offshore wind energy can provide economic and environmental benefits to the state and to the nation.

Offshore wind energy can advance California's progress toward its statutory renewable energy and climate mandates. Diversity in energy resources and technologies lowers overall costs and offshore wind can add resources to technology diversity to the state's energy portfolio. Offshore wind energy development

presents an opportunity to injrac —— attract investment capital and to realize ac —— community, economic and workforce development benefits in California, including the development and preservation of a skilled and trained construction workforce to carry out projects, long term job creation and development of an offshore wind energy supply chain.

Offshore wind energy can contribute to a diverse, secure, reliable, and affordable renewable energy resource portfolio to serve the electricity needs of California ratepayers and improve air quality, particularly in disadvantaged communities. Offshore wind should be developed in a manner that protects coastal and marine ecosystems, and investment in offshore wind energy development can offer career pathways and workforce training opportunities in clean energy development.

Next slide please.

In consideration of these legislative findings and other goals, AB 525 passed the Energy Commission in coordination with an array of specified local, state, and federal partners, and with input from stakeholders to develop a strategic plan for offshore wind energy deployments installed off the California coast in federal waters, and to submit it to the Natural

Resources Agency and legislature by June 30, 2023.

The strategic plan is required to improve at a minimum the following five chapters: identification of sea space, economic and workforce development and identification of port space and infrastructure, transmission planning, permitting, potential impacts on coastal resources, fisheries, Native American and indigenous peoples, and national defense, and strategies for addressing those impacts.

In developing the strategic plan, the five req —— and the five required chapters, AB 525 includes interim work products that the CEC must also complete. First, we must complete and submit to the Natural Resources Agency the relevant, and the relevant fiscal —— relevant fiscal and policy committees of the legislature a preliminary assessment of the economic benefits of offshore wind as they relate to seaport investments, and workforce development needs and standards by December 31, 2022.

Additionally, we are to complete and submit a permitting roadmap to the Natural Resources Agency and the relevant fiscal and policy committees of the legislature by December of this year as well. For purposes of AB 525, the term stakeholders includes but is not limited to: fisheries groups, labor unions,

industry, environmental justice organizations, environmental organization, and other ocean users.

Next slide please.

AB 525 further specifies that the strategic plan shall emphasize and prioritize near term actions, particularly related to the port retrofits and investments and, and the workforce to accommodate the probable immediate need for jobs and economic development. In considering port retrofits, a strategic plan shall strive for compatibility with other harbor tenants and ocean uses to ensure the local benefits related to offshore wind energy construction complement other local industries.

The strategic plan shall emphasize and prioritize actions that will improve port infrastructures to support land based work for the local workforce, and the development of the strategic plan regarding, um, workforce development shall include consultation with representatives of key labor organizations, and apprenticeship programs that would be involved in dispatching and training the construction workforce.

Next slide please.

As a starting point for developing the strategic plan, AB 525 directs the CEC by June 1 of this year to

evaluate and quantify the maximum feasible capacity of offshore wind to achieve reliability, ratepayer, employment, and decarbonization benefits, and to establish megawatt offshore wind and pl—— offshore wind planning goals for 2030 and 2045.

It's also important to clarify that AB 525 specifies that the statutes of AB 525 are not intended to create a technology set aside, or a mandatory minimum for any type of eligible renewable energy resource. As described in AB 525, the megawatt planning goals are for the purposes of creating the strategic plan as required by the legislation. Today's workshop is going to be focusing on this first deliverable that’s due in June of this year.

Next slide, please.

The CEC is currently working to meet this requirement by conducting a literature review of existing publications and research. Some of the reports, studies, and sources of information we have looked at include but aren't limited to studies by the National Renewable Energy Laboratory, and the US Department of Energy, Resources from the California Public Utilities Commission, including Integrated Res —— Integrated Resource Plan, and the 2021 Preferred System Plan, materials from the August 27, 2020 webinar on

offshore wind resource profile and technology costs, as well as the December 17, 2021 planning workshop on the roadmap for offshore wind and integrated resource planning.

Additionally, we've looked at CAISO's study on the CPU's —— the CPUC's offshore wind policy driven sensitivity portfolio for the 2021-2022 transmission planning process, and the 2021 SD 100 Joint Agency report.

These studies tell us the following: California has some of the best offshore wind resources in the world, and that there is a large technical potential off our coasts. Cost for deploying offshore wind has become has come down rapidly and will continue to decrease as the technology becomes more mainstream throughout the world. Offshore wind can contribute to ensuring load flexibility and help save on overall system costs as we move to meet —— meet our SB 100 energy goals. A moderate amount of offshore wind generation can be accommodated on the transmission grid with reasonable upgrades. Additional amounts are also possible but would require significant investments in trand —— transmission infrastructure.

With existing technologies and assumptions, the IRP February 2022 preferred system plan has 1.7

gigawatts online by 2032. And SB 100 driven growth, in the capacity to generate and start clean electricity, can create thousands of new high quality clean energy jobs, especially in the installation and maintenance of solar and wind systems.

This is just a starting point, and we know that more study and analysis is warranted. We plan to develop a list of the various studies and resources we've been reviewing, which we'll make available following the workshop. We invite and welcome comments that recommend additional studies for our consideration. As you continue to read our research and analysis and invite comments and recommendations for how CEC could consider using that information to evaluate and quantify the maximum feasible capacity of offshore wind to achieve reliability, ratepayer, employment and decarbonization benefits.

Next slide please.

The legislation requires the Energy Commission to consider twelve factors when establishing the megawatt offshore wind planning goals. These include findings from the joint agency SB 100 report, the need to initiate long term transmission and infrastructure planning, the need for renewable energy to accommodate California's shifting payload, the generation profile of

offshore wind, potential impacts on coastal resources, fisheries, Native American and indigenous people, and national defense and strategies to address them, the potential to attract supply and plane —— supply chain manufacturing, the need for economies of scales for reduced costs, and real findings of California has 200 gigawatts of offshore wind technical potential, the need to develop a skilled and trained offshore wind workforce, the availability of federal tax incentives, the opportunity for California to participate in federal goals, and executive actions from the governor.

In our review, certain factors, those shown above the horizontal line there, are likely to have greater influence on shaping or affecting the goals than others. But all of the factors in totality are important in establishing megawatt planning goals and contributing to the strategic plan. Today we'll walk through each of the factors and share our thinking giving more time and weight to the factors we think are most pertinent to shaping the goal setting. Of course, we welcome comments that might offer different perspectives on which factors are likely more impactful to shaping the goals.

So now we'll go ahead and walk through the factors.

Next slide please.

The first factor provides critical context for opportunity offshore wind energy represents for California to generate carbon free energy and diversify the state's renewable energy portfolio, especially in light of the scale of the climate crisis. California has very aggressive climate and renewable energy goals, and we're working hard and fast to transition our energy sector to clean electricity. We're working to create — decrease greenhouse gas emissions to 40% below 1990 levels by 2030, and 80% below that by 2050. We're also working toward the economy wide carbon neutrality goal of 2040 by 2045. And we have very aggressive zero emission transportation goals of 100% zero emission vehicles by 2035, and for medium and heavy duty vehicles by 2045.

The 100% Clean Energy Act of 2018, commonly referred to as SB 100, is a pillar of the state's Clean Energy Policy. Updating the state's renewable portfolio standard to ensure that at least 60% of the state's electricity comes from eligible renewable energy resources by 2030, and that by 2045 all retail electricity sold in California, and state agency electricity needs, will be powered with renewable and zero carbon resources.

SB 100 requires the Energy Commission, California Air Resources Board and Public Utilities Commission to prepare a joint report every four years that meets statutory requirements. The first report was issued in 2021 and AB 525 tasked the CEC to consider the findings of the report in establishing the goals.

The SB 100 report found that we need significant build out of clean energy generation over the next 25 years. Portfolio modeling completed for the report covered a range of scenarios and technologies, and in the core scenario, the modeling used a built in assumption that 10 gigawatts of offshore wind was included in the 2045 portfolio.

The core high flexibility scenario showed an annual cost savings of 1 billion in 2045 with a portfolio that includes 10 gigawatts of offshore wind. This is due to avoided battery storage and decrease in economic gas retention compared to SB 100 core scenario with the same annual electric energy demand. The SB 100 Joint Agency Report acknowledges that there are additional investments and actions that would have to occur to realize 10 gigawatts of offshore wind by 2045, and finds that while there is a significant resource potential off the California coast, there are also considerable barriers.

Among the foremost challenges are significant anticipated transmission requirements, and completing —— and competing coastal uses including shipping, fishing, recreation, marine conservation, and Department of Defense activities. Report recommendations include the need to continue to evaluate the potential effects of cost saving emerging resources such as offshore wind, long duration energy storage, green hydrogen technologies, and demand flexibility, and to continue to prioritize energy efficiency and load flexibility to minimize total implementation costs.

Next slide please.

Transmission. Both the availability of existing transmission and the need to develop more transmission in specific areas affect the offshore wind planning goals in Cal —— the off shore wind planning goals California sets, and can expect to achieve over time. The North Coast wind potential is large, and wind speed and consisties —— contis —— consistency is favorable for commercial development.

The North Coast electricity —— electric system is relatively isolated from the California gig —— grid, and primarily serves local community need. Additional transmission will be needed to deliver offshore wind

energy from this region to the grid. The sequence and timing of new transmission is important for minimizing mid term bottlenecks or reliability issues and providing least regrets decisions for the mid and long term.

Existing transmission on the South Central Coast is robust and is near large load centers. Retiring generation provides an opportunity to repurpose existing infrastructure, but there's still a need to do long term planning for both the at sea infrastructure, and ability to utilize existing onshore infrastructure. Ongoing efforts to inform transmission planning and recently completed studies, along with studies currently being initiated, will inform the planning goals and the overall strategic plan.

The three recent transmission efforts we've been looking at while exploring the planning goals include the CPUC's 2022-2023 IRP and transition planning process, the CAISO's first ever draft 20 year transmission outlook, which is a good step toward long transmission long term transmission planning, especially since it incorporates SB 100 resource assumptions, as well as CAISO's sensitivity study results from the long term transmission plan which will be incorporated into future IRP modeling. And third, the transmission upgrading report and policy analysis completed by the

Schatz Energy Research Center at Humboldt State.

These studies collectively evaluate transmission implications of up to 21 gigawatts of offshore wind. The CEC is initiating additional transmission studies in partnership with the state of Oregon and the Department of Defense to explore additional North Coast transmission challenges and opportunities. The information from these studies will influence the development of offshore wind and will inform and help guide the overall offshore wind strategic plan.

Next slide please.

California's shifting peak load. On average California daily peak load is shifting to later in the afternoon, which would create the need for renewable energy sources that continue to generate electricity later into the evening hours. As shown on the slide, the profile of offshore wind in the North Coast on an average day complements solar resources. The profile for the Central Coast is similar to the North Coast, but there are differences across the time of day, season, and total wind resource potential.

Offshore wind is an attractive technology from a system planning perspective due to the associated generation profile that complements solar with higher output in the evenings when electricity demand is high

and solar production is low. Offshore wind also complements solar seasonally and could provide more consistent output during winter months when solar production is lower.

Most recently pursuant to the June 2021 Midterm Reliability Procurement Order, the CPUC published results of the reliability studies which included an annual effective load carrying capability for offshore wind at 36% for 2026, compared to a 22% effective load carrying capability for in state land based wind.

Next slide please.

Closely related to the previous consideration of addressing shifting peak load is the generation profile of offshore wind. Offshore wind, like other variable output renewables, is inherently uncertain. There's inherent uncertainty associated with the projections about its energy and reliability contributions.

In 2020, The Schatz Energy Research Center conducted a study of wind resource generation —— conducted a study of the wind resource generation profile in the Humboldt area and found that power output from the offshore wind could be distributed to int —— in two extremes: either low to no generation as you can see on the top there, or high generation. There can also be times of high variability as seen on the bottom graph.

IRP modeling considers historical weather inputs and their impact on generation and demand and uses them in stochastic analysis to understand reliability of future portfolios. However, additional analysis could enhance our understanding of how offshore wind supports the system and meets peak demand. Real time data is being collected and work continues on this topic that will inform the strategic plan.

Next slide please.

AB 525 requires the Energy Commission to consider potential impacts on coastal resources, fisheries, Native American and indigenous peoples, and national defense, and strategies for addressing those potential impacts in setting megawatt planning offshore wind goals. The CEC, BOEM and state agencies collaborated to develop the California Offshore Wind Energy Gateway, available on the database and website, that hosts hundreds of publicly available datasets to explore ocean wind resources, ecological and natural resources, ocean commercial and recreation uses and community values.

The information on the Gateway was obtained and reviewed in public outreach process with participation by a variety of stakeholders. A public science process helped with the review and evaluation of the datasets to

help determine the quality of the data and how it best, how to best represent and use the data set to help plan for offshore wind. These processes include participation by data owners, species subject matters and the public. The work is still ongoing to ensure we have the most up to date science based data and information to support planning and decision making.

In addition to understanding and using the data. This works —— this work helps identify critical gaps that we are working to fill. This information is also key to inheriting the identification —— initiating the identification of suitable sea space to further evaluate the potential for offshore wind as an initial set of information to assess potential for impacts. As required by AB 525, the Energy Commission will coordinate with other agencies, governments and stakeholders to identify suitable sea space to accommodate the offshore wind energy planning goals and make recommendations regarding environmental impacts and use conflicts, and strategies to avoid, minimize and mitigate significant adverse impacts consistent with California's long term renewable energy, greenhouse gas emission reduction and biodiversity goals.

The statutory deadline for establishing the planning goals is immediate and is required to occur

before the process to identify suitable sea space that can accommodate the planning goals. We plan to immediately begin working on the requirements to identify suitable sea space, once the planning goals are established. Therefore, we'll rely on existing information, including the offshore wind energy gateway, existing environmental reviews and analyses, and other publicly available resources that can draw —— we can draw on in considering the potential impacts to establish the planning goals.

Next slide please.

Decisions to deploy floating offshore wind will result in new infrastructure into the marine environment that will introduce the following effects: structural impediments, sea bottom and habitat alterations, noise, EMF effects, water quality changes, and ecosystem level changes. Through extensive outreach and study, major themes have emerged that help identify a suite of impact concerns.

From an ocean uses perspective, tribal governments have identified potential impacts to cultural landscapes and sacred sites. Fishing industry stakeholders have identified potential impacts of fishing and fisheries, including restricted access to fishing grounds, impacts to fish habitat and species,

and impacts to specific types of fishing activities such as midwater and bottom trawl.

Coastal communities have identified concerns regarding visual impacts from turbines and lighting, increased vessel traffic and potential economic effects of fishing and tourism in dependent coastal economies. From an environmental perspective, potential impacts have been identified to pelagic and benthic fish, marine mammals, sea turtles, marine birds, seabird and habitat disturbance, water quality, and ocean currents and upwelling.

There are a multitude of study and research efforts that are available and in process to help the agencies examine the effects of and the potential impacts from these effects for the deployment of offshore wind that will be informative in the BOEM affirm planning and leasing process, and in developing the required analysis for the AB 525 strategic plan.

Academic institutions producing research and studies examining a variety of issues are —— are producing research and studies examining a variety of issues. Good examples are the work of the Humboldt State University Schatz Energy Center, and the Center for Marine Science at Cal Poly San Luis Obispo, which both have a wealth of information available at their

respective websites. Agencies including BOEM, CEC, OPC, and the State Lands Commission have recently completed studies, have studies and progress, and studies about to begin, which will continue to add to the information we already have, fill data gaps and explore new issues that are unique to the deployment of offshore wind.

The Ocean Protection Council has funded and co-funded a variety of studies including ongoing work by Conservation Biology Institute or CBI, to further develop and assemble the offshore wind data on database in, and help understand and visualize species and ocean use. Work by po —— work by Point Blue Conservation Science to evaluate potential offshore wind locations, and work by the Northern California Commercial Fishermen's Association to identify community mapped fishing grounds on the north coast.

Two recent papers are of —— that are of particular importance. We call your attention to a paper by Maxwell and co-authors, which investigates the potential impacts of floating wind turbine technology for marine species and habitats, and a paper by Farr, Ruttenberg and co-authors, explored the potential environmental effects of deep water floating offshore wind energy facilities.

These papers are the first available to examine

a large volume of published work on offshore wind and similar infrastructure deployed in the marine environment, and to synthesize that information as it applies to Cal —— California —— the California experience of examining offshore wind.

The CEC and other agencies are examining this wealth of information as a start in evaluating the potential impacts of offshore wind. Collectively this information supports potential approach to examination of the effects, impacts, and ocean use issues that is helpful to employ when working through the strategic planning process and the BOEM leasing process.

Other studies are too numerous to list or discuss here, but as previously mentioned, following the workshop, the CEC will post a list of known studies and links to information hubs so that everyone has access to this body of information.

Next slide, please.

A possible benefit of deploying wind offshore California is the economic development opportunities for California and the Pacific region from scaling up a new industry. A report —— opportunities —— a report California offshorwin, (indiscernible), off —— (indiscernible), impacts and grid integration conducted by the UC Berkeley Lab —— Labor center, indicates that

the largest economic development benefits of an offshore wind industry would come from having a local supply chain for manufacturing components used in the development of projects. The offshore wind industry is a global market, and floating technology today is nowhere near having reached economies of scale, but it's projected to do so over the next decade with projects being planned in markets around the world.

We recognize that establishing these goals provides an opportunity for this industry to develop a thriving supply chain in California, and through partnerships in the Pacific region and beyond, we can build a thriving national domestic supply chain. And we understand that for industry the size of the goal is important for instilling confidence to make the investments needed for local supply chain development.

Economies of scale. We are approaching the requirement that the CEC consider the need for economies of scale to reduce the costs of floating offshore wind with the requirement to consider the potential to attract supply chain manufacturing for components in the Pacific region.

We welcome feedback offering a different approach to evaluating supply chain and economies of scale. This is supported in part by an NRL 2020 study

in partnership with BOEM and the CPUC to update cost assumptions on offshore wind in California, and found that the levelized cost of energy from offshore wind could decrease by as much as 44% by 2032. Assum —— assuming a global deployment of eight gigawatts by 30 —— 2032.

They attribute this potential cost decline to a combination of things including turbine upsizing, which will result in lower per unit costs, economies of scale and efficiencies in manufacturing, and technology innovations which carry reduced material use, improved performance, and improved logistic efficiencies. Each of which involves the development of a robust supply chain.

The report and cost estimates do not include other significant investments that will be needed to construct offshore wind such as the port —— support facilities, and transmission. Of course, we welcome feedback offering a different approach for evaluating supply chain and economies of scale.

Next slide please.

In 2020, NRL published a report updating its 2016 assessment of offshore wind potential from 150 gigawatts to 200 gigawatts. The report included an updated offshore wind speed data set and applied revised

input assumptions to generate new estimates of technical potential for floating offshore wind in California. In the report, NRL began with an estimated grass potential capacity of close to 1700 gigawatts along the coast and out 200 nautical miles from shore. After excluding areas with low wind speed and water depths greater than 1300 meters, NRL got to the new estimate of 201 gigawatts of technical potential.

NRL's estimate of technical potential does not account for other important factors such as competing uses or environmental considerations, which can greatly narrow the technical potential down to a more feasible potential. We're proposing a more in-depth analysis of sea space to accommodate the megawatt planning goals as part of this strategic plan, and we'll —— and we'll use similar wind speed and assumptions —— simili —— similar wind speed assumptions and depth limitations.

Next slide please.

Having a skilled and trained workforce will be necessary to successfully deploying offshore wind in California. We recognize that the workforce opportunity —— that the workforce opportunity from a robust offshore wind industry in California is significant. In a report published by the American Jobs project, they projected that with additional state policies aimed toward

advancing offshore wind and a build out of 18 gigawatts by 2045, California could see over 17,000 jobs. Without additional policies supporting the growth of offshore wind, they projected a build out of five gigawatts by 2045, yielding just over 5000 jobs.

We don't view workforce considerations as a primary driver for establishing the amount of megawatt planning goals, but are required by AB 525 to emphasize and prioritize near term actions to accommodate jobs and economic development and consult with representatives of labor organizations and apprenticeship programs.

Further, AB 525 directs the CEC to conduct an analysis of the workforce development needs of the California offshore wind energy industry, including occupational safety requirements, the need to require the use of a skilled and trained workforce to perform all work and the need for the Division of Apprenticeship Standards to develop curriculum for in person classroom and laboratory advanced safety training for workers. And also, to make recommendations for workforce standards for offshore wind energy facilities, and associated infrastructure including but not limited to prevailing wage, skilled and trained workforce, apprenticeship, local hiring, and targeted hiring standards and ensure sustained and equitable economic

development benefits.

We've already started some of this analysis through engagement with the California Labor and Workforce Development Agency, California Workforce Development Board and key labor and trade organizations as we're approaching the upcoming BOEING —— BOEM leasing process. For example, we've learned that the California Workforce Development Board has a number of ongoing activities that are helping set a foundation for future offshore wind workforce development, including research on workforce needs and supply chain sourcing, as well as developing models for building regional partnerships, inclusive of employers, organized labor, equity organizations, education and training service providers and local government. We've also been engaging with ports and industry on port requirements and related workforce opportunities and challenges.

Next slide, please.

Ports and watercraft facilities are a requirement of supporting the installation, operation and maintenance of floating offshore wind. Studies conducted by both BOEM and the —— the Schatz Energy Research Center, have found that California's existing ports would require major investment to expand their existing infrastructure, which are along length —— which

are long lead time investments.

Most of these improvements would be related to work structures, lay down areas, storage, heavy load high reach cranes, and potentially dredging for newer expanded facilities. The state is actively taking steps to better understand and address port infrastructure challenges.

For example, the State Lands Commission in partnership with BOEM is in the process of building on their existing work by conducting a ports inventory, to better understand infrastructure capability gaps. The State Lands Commission will also be supporting a regional ports assessment to explore any additional opportunities outside of existing ports that may be capable of supporting floating offshore wind activities, especially in parts of the state where limited capabilities exist.

In addition, the CEC and state agencies have met with the offshore wind industry and representatives from key ports to better understand the needs of floating offsh —— floating technology deployments, and the current opportunities and constraints to accommodate those needs.

Finally, in the 2021-2022 state budget, the CEC was allocated 10 and a half million dollars to provide

the Humboldt Bay Harbor Recreation and Conservation District to report improvements that can support offshore wind, and the Governor's proposed 2022-2023 budget includes a proposed $45 million allocation to the CEC for supporting port development throughout the state.

Next slide, please.

Tax incentives. So, the offer when provision of the investment tax credit, or the ITC, allows for a 30% investment tax credit that applies to capital expenditures on projects that start construction before 2025, and are completed within 10 years. A safe harbor provision allows for projects that start construction or spend at least 5% of a project's total capital expenditure by the end of 2025, and come online bef —— by —— by 2035 to capture the benefit of the ITC.

The CPUC IRP preferred system plan includes 1.7 gigawatts of offshore wind energy through 203 —— by 2032, and assumed the 2025 safe harbor ITC deadline could be met by developers. The IRP analysis showed that if the ITC is not part of the offshore wind cost assumptions, then the optimal ris —— resource portfolio does not include any offshore wind 2032 beyond the few hundred megawatts included in some load serving entities' individual IRP's

When combined with other key offshore wind assumptions, including generation profile, capital and operating expenses, and financing costs, the ITC has the effect in the model of reducing implied levelized cost of energy from the 60 to 70 megawatt hour range to the 40 to 50 megawatt per hour range. Or megawatt hour. Excuse me, megawatt hour.

An important caveat to unpacking levelized cost of energy used in the NRL report and the CPUC IRP resource modeling, is that the cost of major bulk transmission expansion are not included in the levelized cost of energy or capital expenditure values.

However, we don't know the availability of the federal tax incentives will be after 2025, and developers of projects will be in the best position to assess the risk factors involved in making capital expenditures to quality for the ITC.

In the federal —— in the vein of federal efforts in March of last year, the Department of the Interior Energy and Commerce announced a shared goal to deploy 30 gigawatts of offshore wind in the United States by 2030, while protecting biodiversity and promoting ocean co-use. The Biden administration sees the achievement of this target as a pathway to 110 gigawatts by 2025. The Biden administration and Governor Newsom announced an

effort to advance areas for offshore wind up the northern and central coast of California. The Biden administration contextualizes this announcement as part of the nationwide 2030 deployment goals.

As shown on the slide and reported by the 2020 —— reported by the 2021 edition of the USDOE offshore wind market report, there are eight states with existing offshore wind procurement targets totaling close to 40 gigawatts by 2040. As part of the announcement of setting a 30 gigawatt goal, the Biden administration announced that BOEM is expecting to hold seven additional lease sales by 2025, the first of which just occurred in the New York Bight last week. BOEM is also planning to review construction operation plans representing more than 19 gigawatts of offshore wind by 2025.

Next slide please.

So here we have a summary snapshot of the known embedded numbers that can inform the development of the offshore wind planning goals and that you've heard throughout the various considerations today. Combined, the Humboldt and Morro Bay wind air —— wind energy areas designated by BOEM could support up to 4.6 gigawatts of offshore wind development. The SB 100 Joint Agency Report core scenario built an assumption in the resolved

model of 10 gigawatts of available offshore wind in the resource portfolio by 2045.

Through the Integrated Resource Plan preferred system planning process, the CPUC identified 1.7 gigawatts of offshore wind by 2032. Based on the CPUC 2019-2020 resource portfolio, CAISO's sensitivity study assessed the cost of upgrading transmission to accommodate 8.3 gigawatts of offshore wind with the potential to scale up to 21 gigawatts. And in early 2020, NRL found that the offshore wind technical resource for California was more than 200 gigawatts.

Next slide, please.

So that concludes the run through of the 12 factors AB 525 requires us to consider in evaluating the offshore wind planning goals for 2030 and 2045. And identified some of the information resources we're looking at, as well as how are we thinking there —— they will be shaping the planning goals.

We invite and welcome comments that recommend additional studies and information for the CEC's consideration as we continue our research and analysis and prepare a draft report on the evaluation and quantification of the maximum feasible capacity of offshore wind to achieve reliability, ratepayer, employment and decarbonization benefits and establish

megawatt planning, offshore wind planning goals for 2030 and 2045.

We also invite comments on recommendations for how the CEC considers using that information to inform the megawatt offshore wind planning goals as required by AB 525. And we welcome comments on other interrelated aspects of the presentations and discussion today, including the broader AB 525 requirements that were discussed, as well as the upcoming steps in the BOEM leasing process.

As a reminder, we would appreciate written comments by March 11 to help inform a public review document —— draft document that describes how we're meeting the requirements of AB 525 to establish the offshore wind planning goals. We plan to provide opportunity for public review of the draft document before preparing a final document ahead of the CEC business meeting for consideration by the CEC before June 1, 2022.

That was my last slide I believe so thank you. And I will hand it back to Jim.

MR. BARTRIDGE: Thanks, Rhetta, excellent overview. Let me turn and ask if anyone on the dais has any questions or comments and if you do, please turn on your video.

Okay, one more call for the dais. Going once, like an auction, right. Okay. So I just want to say thanks to all of our presenters and participants today. We'll now move to the public comment period. For that, I'll turn it over to the public comment, public advisors office and they just want to say that the public comment today is really what's helping us with the strategic plan and the goal setting so we definitely look forward to what you have to say and submit written comments afterwards if necessary as well. Thank you so much.

MS. AVALOS: Hi. Thank you, Jim. Hello. For the record, I like to introduce myself, I'm Rosemary Avalos and I work with the CEC Office of the Public Advisor Energy Equity and Tribal Affairs.

Moment please.

Now we'll move on to public comments. For each person you will have up to three minutes to speak and to comment. In zoom click on the raise hand icon. On the phone, press star nine, and to unmute star six. When you are called upon your line will be opened, and please make sure to unmute on your end. And, for the record, please spell your name and state your affiliation, if any, and then begin your comments. So I'm going to move on to the participants and I would Manley McNinch, your line is open.

MS. ANDERSON: Manley you should be able to unmute yourself.

MR. MCNINCH: There we go. Can you hear me okay?

MS. ANDERSON: Yes Great.

MR. MCNINCH: Hi, my name is Manley McNinch, that's M-A-N-L-E-Y M-C capital N-I-N-C-H, and I am a special representative for the Southwest Regional Council of Carpenters, Local 805, and we cover the areas from Ventura County through San Louis County. I personally live in Santa Maria, Orcutt area.

I've lived in this area since 1979, and I've seen a lot of en --, seen Diablo Canyon come, and now I'm seeing it go. And I've seen a lot of new technology new industry coming in. I want to commend the Commissions for putting the skilled and trained worker language in here to start, you know, focusing in on it. Because it's going to be critical to replace these jobs that we're losing up in that area, and this offshore wind is going to be one of the best ways I've seen yet to be able to do it.

It's going to be key that we put the skilled and trained language in there and local hire protections because, currently they just cut through putting a onshore wind project up over in Lompoc, and not one

local person from California pretty much, worked on our project. Every, you go out to the job site, it's people from all over the country, except for anyone from the local area. So all that tax dollars, all the money everything just went right back out of, out of Santa Barbara County. And these offshore wind projects are a good way to bring, bring good high paying jobs in and keep the money here. You know and local tax bases because San Luis county is going to take a major hit when Diablo Canyon gets decommissioned. The tax revenues and stuff that could potentially come in off these offshore wind projects is going to be a great shot in the arm for the local counties. Santa Barbara County is going to benefit off of it, and probably even Ventura County as far, depending on where the port operations go in.

Hopefully they'll put the one of the ports in off Vandenberg, or excuse me off of Diablo Canyon, and that's be a perfect way to reutilize that property out there to keep it where it's making, helping people make a living and making money. And I'd also like to hopefully see the state people open up that area right off Vandenberg Air Force Base. That's another really good project that would bring great jobs, great income to the local area. Thank you for your time today.

MS. AVALOS: Thank you, and now we'll move on to the next commentor. And I'll remind your please, for the record, spell your name and state your affiliation if any. Adam Stern, you may go ahead and begin your comments.

MR. STERN: Thank you. I'm Adam Stern. That's S-T-E-R-N, executive director of Offshore Wind California. We're a business group of developers and technology firms dedicated to the responsible development of offshore wind power in our state. We want to thank the CEC for hosting this important workshop today as well as the other state and federal agencies who are participating.

Several decades of offshore wind industry experience and academic study have demonstrated conclusively that going big is one of the most important keys to achieving success with this remarkable clean energy technology in California, and other US and global energy markets. For offshore wind, economies of scale will be essential for driving down costs, delivering competitively priced clean power and encouraging industries and jobs to locate in our state.

We're seeing it on the US East Coast, where states have made commitments to well over 30 gigawatts of fixed bottom offshore wind, and we're seeing it in

Scotland, which in January concluded lease auctions that will put 15 gigawatts of floating offshore wind turbines in the water in the coming decade.

These successes are all being driven by economies of scale and advances in wind turbine technology that are dramatically reducing costs that can save ratepayers money while also cleaning up our environment. That's why our organization is encouraging Californians to set bold but realistic goals to generate a minimum of three gigawatts of offshore wind by 2030, at least 10 gigawatts by 2040, and looking ahead at least 20 gigawatts by 2050. This aligns well with the Biden Administration's National goal of achieving 30 gigawatts by 2030 and 110 gigawatts by 2050.

It's also supported by last year's joint Agency report, which would conclude that for California to reach 100% clean energy by 2045, it will need a diverse portfolio of renewable energy including offshore wind. The studies SB 100 core scenario calls for 10 gigawatts of offshore wind by 2045, or as much as the model would allow. And in its first ever 20 year outlook CAISO has included 10 gigawatts of offshore wind for transmission planning.

Our organization believes that offshore wind should be a big part of California's clean energy

economy. To make this a reality, we urge the CEC to set ambitious goals for offshore wind in 2030 and 2045. We're off to a good start with the planned auctions at the Morro Bay and Humboldt wind energy areas this fall. We're committed to working with the CEC and other federal and state agencies to provide the best available industry insights and data to make California a leader in floating offshore wind power, much as it is in other renewable energy resources. Thank you for your consideration.

MS. AVALOS: Thank you. Moving on to the next commenter, Gary Latshaw, and please for the record spell your name and state your affiliation , if any, and then begin your comments. You may begin.

MR. LATSHAW: Hello, my name is Gary Latshaw. Gary G-A-R-Y, Latshaw, L-A-T-S-H-A-W. I belong to a variety of environmental groups but I'm not in a position to represent any of them right now. My request is when it comes to the environmental analysis that you allow, I don’t know how to put to this, but you allow some level of degradation, or it might be environmental issues, to allow more power. Your goals are 10 ish gigawatts with a potential of 200. The dangers of climate change are essentially infinite.

We may be too late to actually save

civilization. So I think that that you should look at higher numbers. Specify what will be lost, and the decision makers will have to decide. And I'm not much of a marine person, but on land it's often the red legged frog. So you're not gonna just just think of how many red legged frogs may be hurt out there.

The other thing is, this is also I think, an opportunity for California to be an exporter of a new technology. The floating platforms can be floated to other coasts, either up the coast of Canada and our states above us. Perhaps the next door or maybe even South America. The key is very specialized manufacturing for these very large devices. So I thank you very much for providing this and given it so much detail.

Thank you.

MS. AVALOS: Thank you. And turning now to our next commenter, Anthony Ventura. And again, please, for the record, spell your name, and state your affiliation, if any, and you may begin your comments. You may need to unmute on your end as well.

Go ahead, Anthony.

MR. VENTURA: Okay, good afternoon. My name is Anthony Ventura, I'll spell it for you, A-N-T-H-O-N-Y, last name Ventura, V-E-N-T-U-R-A. I am a representative

with the Southwest Regional Council of Carpenters, Local 805. Pat we have over 1900 members and their families that live in the 805 area.

I also was born and raised in on the Central Coast. In San Luis Obispo I was born, went to school there, grade school then went on to Arroyo Grande High School and graduated in 84. We support, we support the clean and renewable energy, but the decommissioning of Diablo Canyon and the loss of good job paying jobs, not to mention all the revenue that we will lose from this. With wind energy, this will bring in new good paying jobs that will build these projects, and the revenue that these projects will generate will go right back into our community and local businesses. This will be environmentally friendly and will offset the jobs and revenue from the Diablo Canyon decommissioning.

These projects are exactly what we need to put local residents back to work as the Diablo Canyon starts to phase out. This will have a huge impact on the Central Coast with the loss of jobs and revenue that will impact the local economy. In closing, I strongly support having a local skilled and trained workforce and appreciate that you recognize the value of a skilled and trained workforce.

Thank you.

MS. AVALOS: Thank you. And moving on to the next commentor, Nancy Rader. And please, for the record, spell your name and state your affiliation, and you may go ahead and begin your comments.

MS. RADER: Good afternoon. Nancy Rader R-A-D-E-R, with the California Wind Energy Association. It's very encouraging to see the level of agency collaboration that is evident today, and to see the state's focus rise to the challenges we're facing. I agree with another commentary that's very important that the state set installation targets that are high enough to drive economies of scale and supporting domestic supply chain.

But we need a reality check. The recent East Coast auctions have been successful because the fixed bottom technology is proven and available, and there was much greater certainty than we have in California right now, including commitments for power offtake and available port space.

California's ambitious goals must be accompanied by careful plans and near term decisions to support the investments that we will need to capture supply chain and jobs for the new floating platforms here in California. The proposed demonstration projects is state waters, which can be online at least four years

ahead of the BOEM projects, should be used to evaluate real world impacts, environmental impacts, mitigation measures and technologies and support the buildup of ports, supply chain, and workforce that offshore wind projects will need if they're to assemble floating platforms here in California. By the way, this is Scotland's first step in its long term plans as well.

The state also needs to quickly make at least some of the foundational decisions that investors need to see before placing multi hundres million-dollar bids in the upcoming auctions. Before those auctions occur, we need to establish greater market certainty so potential bidders can accurately gauge potential risks and benefits.

To that end the state needs to devise a power offtake plan this year for the demonstration and commercial projects. It needs to complete a ports assessment and plan this year. It needs to encourage CAISO to reform its deliverability assessment methodology, which by enabling more efficient use of the grid, can immediately provide assurance of sufficient transmission capacity for at least three gigawatts of Morro Bay capacity.

We need to use the next transmission planning cycle to make real progress towards the CAISO’s 20 year

conceptual transmission plan. And finally, we need to implement CEQUA streamlining measures for all offshore wind related infrastructure to ensure that projects don't get paralyzed and perhaps killed by years of lawsuits.

And lastly, we're very concerned about the high auction prices that we've seen on the East Coast. Sky high lease payments could force developers to import everything and drive the cost of offshore wind way up without providing any economic or social benefits to the state. We need BOEM's auction mechanism to include a multiple

MS. ANDERSON: Hello, and welcome to black women bare min(indiscernible).

MS. RADER: That counter acts these powerful market forces and ensures lasting public support for offshore wind in California. We'll be elaborating on these and other issues in our written comments. And thank you very much.

MS. AVALOS: Thank you. Now moving on to the next commenter, Sarah Xu. And again, please, for the record, spell your name, state your affiliation, if any, and you may begin your comment. You may need to unmute on your end as well. Go ahead, Sarah.

MS. XU: Good afternoon. My name is Sarah Xu,

spelled S-A-R-A-H X as in X-Ray, U as in uniform. And I'm calling on behalf of Brightline Defense, an environmental justice nonprofit based in San Francisco, working on empowering communities to build sustainable environments for clean energy and workforce development. Thank you for this opportunity to comment.

Offshore wind has the potential to generate more electricity for the state, and it will be critical for California to achieve its 100% renewable energy goals and create a new green economy. All this can be done while creating 1000's of quality family sustaining jobs in construction and maintenance of offshore wind turbines. As last week's New York Bight auction revealed, there's significant and growing interest in offshore wind and renewable energy.

However, we must make sure that this work is equitable increase the long lasting benefits for California and Californians through investment in local communities through strong local hire policies to reach into historically underserved outlying communities, and project labor agreements covering offshore wind related construction, both onshore and offshore.

Project labor agreements can deliver more economic benefits to the local communities, build a skilled workforce, and strengthen offshore wind

workforce development pathways to long term sustainable careers. The social economic impacts of offshore wind are a significant benefit to frontline communities in the Morro Bay and Humboldt regions. Strong local jobs will create clear pathways for youth communities and sustain where they live. A lack of meaningful and thoughtful development will create and deepen inequalities while forcing the local workforce to travel further to work sites.

As a clean air alternative to powering the state offshore wind will diversify our energy mix and strengthen California's overall grid. Through these workforce benefits and more, the California Energy Commission should consider offshore wind deployment about these 10 gigawatts by 2040 to put California on track to a 100% clean energy future.

California should go big on offshore wind and create a strong vision for California offshore wind for generations to come. Thank you.

MS. AVALOS: Thank you. And moving on to our next commenter, Natalie Nax. And again please spell your name, state your affiliation, if any, and you please may begin your comments. Natalie?

MS. NAX: my name is Natalie NAX. That’s spelled N-A-T-A-L-I-E N-A-X. I'm speaking on behalf of

Ceres, a sustainability nonprofit that runs a coalition of more than 80 major businesses, many of whom have substantial operations in California. The major businesses we work with recognize that climate change poses a significant risk to their long-term economic success, and threatens the livelihood of the communities in which they operate.

For these reasons, many publicly supported AB 525 to jumpstart California's offshore wind industry including Salesforce, Sierra Nevada Brewing GAP and Workday. These companies see offshore wind as a cost effective clean energy resource and a significant economic opportunity for the state.

We urge the Energy Commission to set ambitious 2030 and 2045 targets for offshore wind development. Thank you for all your hard work to advance clean energy solutions and we look forward to continued engagement with you on AB 525 implementation. Thank you.

MS. AVALOS: Thank you. Now moving on to our next commentor, LorryAnn Velez. And again, please, for the record, spell your name and state your affiliation, if any, and you may begin your comments. Okay, she dropped off. Move on to the next commenter, Ben Grundy. And again, for the record, spell your name, and name your name, and state your affiliation, if any, and you

may begin. Thank you

MR. GRUNDY: Hi, my name is Ben Grundy, B-E-N G-R-U-N-D-Y, and I'm speaking on behalf of Environment California, a statewide advocacy group that works to tackle global warming protect the ocean and fight for clean air, clean water, open spaces and a livable planet.

California's devastating wildfires and current drought emergency underscore the urgent need to accelerate our transition to a 100% clean energy economy. One of the best clean energy sources in California is the wind blowing off our coast where the wind blows faster and harder than anywhere else in the US. To deliver a grid resilience, better air quality and clean energy to Californians, the California Energy Commission must set a strong target for offshore wind development of at least 10 gigawatts by 2040.

In our recent report, Offshore Wind for America, we found that California has the technical potential to meet more than 1.5 times our state's entire electricity needs from 2019, just from offshore wind. California cannot afford to maintain its unsustainable dependence on fossil fuels. We must invest in clean energy solutions that we can produce right here in California. And the faster we can move to deploy clean energy

instead of burning fossil fuels, the better chance we have for the future. Thank you.

MS. AVALOS: Thank you. Now moving on, again to LorryAnn Velez. Again, Lorry, please, spell your name, and state your affiliation, if any. You may go ahead and begin. Okay. I think she's had a little bit of trouble, um, being able to comment.

MS. ANDERSON: Rosemary, I'm sorry, she had to be promoted to a panelist so, LorryAnn are you there?

MS. VELEZ: Yes I am.

MS. ANDERSON: Okay great.

MS. VELEZ: Yeah, can you hear me? Okay. Hi my name is LoryAnn Velez, L-O-R-R-Y-A-N-N V-E-L-E-Z. I am with the Barbareño Band of Chumash Indians here in Santa Barbara. I just would like to acknowledge our commissioners for, thank you, for the outreach for tribal communities and we're looking forward for the assessment and working further and furthering our relationship with the commissioners. I want to thank you for your time and very honored to be here today. Thank you.

MS. AVALOS: Thank you, LoryAnn. Now turning to Annie Secrest. And again, please Annie spell your name, and state your affiliation, if any, and you may begin. Annie, you may need to unmute on your end.

MS. SEACREST: Okay, thank you. Good afternoon. My name is Annie Secrest A-N-N-I-E S-E-C-R-E-S-T, and I'm with the County of San Luis Obispo. So to begin, I would like to express my gratitude to Commissioner Douglas and the rest of the federal and state agency staff members have been working tirelessly and thoughtfully to formulate a strategy for setting and achieving offshore wind goals to help achieve our ambitious climate goals.

I'd also like to thank Director Mark Gold for his agency's work to assess the coastline for port infrastructure that can support offshore wind. I humbly ask that the state, that staff at the federal and state agencies keep the Central Coast in mind when assessing how the state can achieve its ambitious offshore wind targets.

Our region declared its bipartisan commitment to advancing offshore wind, planning and development, in a letter that was signed by our congressman, California Senator, Assemblyman, County Board of Supervisors, the president of Cal Poly San Luis Obispo, our Tri County Building and Trades Council and a regional economic development consultant.

We understand that our challenges and opportunities are different than those up north. The

Central Coast has existing transmission infrastructure that can support offshore wind functions. Our region is looking for ways to capitalize on this new potential blue economy, especially in light of the impending closure of Diablo Canyon. We are seeking to keep and develop highroad jobs for our region. We are interested in supporting offshore wind development while reusing infrastructure to keep our beautiful coastline intact. We ask that future efforts include assisting our region in developing this new economy.

Thank you for your time.

MS. AVALOS: Thank you. And now that closes our public comment period, and we would like to remind the audience that the additional opportunity to submit written comments through our Commission's filing system. There's a link in the chat that you can link to the filing system. And you can also visit the offshore renewable energy webpage on the energy Commission's website, and you'll find the link to submit comments to the docket 17-MISC-01. The deadline is 3pm on Thursday, March 11.

Now I invite Commissioner Douglas to return and to provide closing remarks.

COMMISSIONER DOUGLAS: Thank you very much, Rosemary, and let me ask just before I provide closing

remarks. Would anyone else on the dais like to provide any closing thoughts?

(PAUSE)

All right. I See a couple people might have their hands up. Eli is that right, or no?

(PAUSE)

Okay. All right. Well, if you're on the dais and you'd like to speak, go ahead and turn your video on, and otherwise I will start to adjourn this proceeding.

I want to thank, again, the interagency staff teams for their close collaboration and their very hard work on offshore wind issues going forward and back over years really. And the leadership group just the tremendous leadership groups and the different agencies, departments, commissions, involved in all of this. My advisors, in particular, for really digging in on the with staff to help prepare for this workshop. And all of the participants, all the speakers, and all the participants in today's workshop.

So with that, I very much appreciated the public comment. I want to emphasize the value, and the value to us and the importance of submitting written comments if you would like to do so. And with that, we're adjourned.

MR. BARTRIDGE: Commissioner, if I could interrupt you, it looks –

COMMISSIONER DOUGLAS: Oh, sorry.

MR. BARTRIDGE: – like we do have some more public I apologize for that. Yeah.

COMMISSIONER DOUGLAS: Let's do it, not a worry.

MR. BARTRIDGE: Thank you. RoseMarie?

MS. AVALOS: Yes. I'll go ahead and call on Matthew. Okay, we do have a few more that just came in after we were closing. Go ahead Matthew. Make your comment. And again, please spell your name, state your affiliation, if any, and you may start.

MR. MARSHAL: This is Matthew Marshal. M-A-T-T-H-E-W M-A-R-S-H-A-L-L. I'm the Executive Director of the Redwood Coast Energy Authority, and I was trying to sneak in the last public comment before it closed just to acknowledge Commissioner Douglas's work and contributions on this. Hopefully with a different title going forward, I hear, but your leadership on this issue has been very important to us on the North Coast who are very committed to seeing this move forward. And so I didn't want to go off the record. I want to be on the record as communicating from the North Coast our appreciation for your efforts. Thank you.

MS. AVALOS: Thank you, and we'll move on to the

next public commentor, Varner Seaman. And again, please spell your name and state your affiliation, if any, and you may need to unmute on your end. Thank you, go ahead.

MR. SEAMAN: Thank you. My name is Varner Seaman V-A-R-N-E-R, and my last name is Seaman S-E-A-M-A-N. I'm with the American Clean Power Association, California. We're the California branch of a national trade association that's a multi technology clean energy trade association of wind, solar and battery storage, working both nationally as well as in the state of California. Our membership is made up of here in California, of folks who are working on doing the development of offshore wind technology.

I just wanted to thank, as other folks that said, to acknowledge the tremendous collaboration between both federal agencies and the state agencies. We, as an industry, very much appreciate this collaboration, and we know that as we go forward, it's going to be very important that we continue to develop that collaboration and strengthen it, and find ways to make sure as we continue down the path forward that that we can keep the momentum that we've already built going forward.

And also as others have said, to thank

Commissioner Douglas for your leadership and keeping us moving forward in a timely fashion on all this work. I also wanted to just as we, as we look forward to establishing these goals and appreciating all the staff work that's gone into this, and the work that it's going to take in the next few weeks to put together a draft report, we would encourage the state to take an ambitious and an assertive role in terms of establishing the goals as they come forward.

At ACP we think that the best way to incentivize and to create that supply chain and create the good jobs and supporting the local jobs creation that this industry has the potential to do so, that a consistent procurement that takes place between now and 2045 is going to be an important way to move forward. What we would encourage, and we'll put this in written comments as well, is that the state look to establish a three gigawatt goal by 2030. and that we, as the state of California, that we look towards adding five gigawatts a year, or five gigawatts every five years or a gigawatt a year, eventually reaching an 18 gigawatt offshore wind target by 2045.

We think that that consistent glide path is is complementary with what offshore wind California talked about and a good way to create a strong path forward for

this industry. I also want to just echo the comments that Nancy Rader with CALWEA made in terms of support for early action and knowing that we've got a long road in front of us. This is an important year an important year for us to get some clarity in terms of procurement as well as port activity.

So with that, thank you very much and we appreciate everybody's time and look forward to working with everyone as we move forward. Thank you.

MS. AVALOS: Thank you. Now moving on to our next comment to Nancy Kirshner Rodriguez. And again, please spell your name, and state your affiliation, if any. You may begin. Thank you.

MS. RODRIGUEZ: Thank you so much. And good afternoon everyone. Nancy, N-A-N-C-Y, Kirschner, K-I-R-S-C-H-N-E-R, Rodriguez, R-O-D-R-I-G-U-E-Z, and I am with the Business Network for Offshore Wind, and I will echo, as others have said, wishing Commissioner Douglas a great opportunity in her new role and to thank her and the many other leaders that spoke today for their collaboration and commitment to moving offshore wind forward as we look towards a future auction and opportunities for the development of a domestic supply chain and many opportunities for Californians with this renewable energy technology.

Business Network for Offshore Wind is a national nonprofit. We do, we have members that range across the spectrum of the supply chain and, and we have been proud to work and partner with many of the organizations commenting here today. We, too, believe that it is extremely important for there to be a significant goal identified, and moving forward, and we do agree with the goal of three gigawatts by 2030, and looking towards as large a result as we can see by 2045. And we recognize and we want to comment on the need for there to be a significant goal to move forward this significant industry and supply chain.

We appreciate the many different voices that we are hearing today. We as an organization are committed to working in partnering with others and we look forward to the next level of process here. And we will be submitting written comments as well. Thank you.

MS. AVALOS: Thank you. Moving on now to Molly Croll. And again, please spell your name, state your affiliation, if any, and you may begin.

MS. Croll: Thank you very much. Molly Croll, C-R-O-L-L. I'm with Avangrid Renewables. We are a land based and offshore wind developer with roughly five gigawatts of offshore wind in development on the East Coast, including the Vineyard Wind One project, which is

the first commercial scale project under construction in the US. Of course we'd like to echo a strong amount of gratitude for Commissioner Douglas, we certainly would not be where we are today without your leadership. So thank you.

Appreciate the comments from the commissioners on the dais about the work the CEC, the CAISO, the PUC, and other state agencies have done over the last couple of years. Also appreciate your presentation, Rhetta, showing the work that's been done and the resources from academic institutions that can guide the CEC's goal setting process.

I'd like to just emphasize that AB 525 is offshore wind planning legislation, and the goals the CEC is assigned to set are planning goals. They will not tie the hands of the PUC, who is proceeding on its own IRP planning and evaluation for how offshore wind fits into reliability, cost and, carbon driven portfolios.

So while I agree with Nancy Rader that we will need a broker about for offshore wind, the task before the CEC today is not to determine that. The task is about setting planning goals for the state and setting a vision. So I would argue that the purpose of these goals is really sending the market signal based on long

term expected needs, directing planning at the right scale to solve some of our challenges of port infrastructure, and planning for supply chain and infrastructure, and third, quantifying future potential sea space needs so we can do the right environmental and spatial planning ahead of the next wave of offshore wind options.

So those three goals, I think, really cover the criteria included in the 525 legislation. So again, I think you know, thinking about this as a top down exercise rather than a bottom ex-, bottom up exercise, will be very helpful. We don't have to get super wrapped around the axle on precisely what's feasible over what timeframe but instead, setting ambitious enough goals with reasonable assumptions about starting point, end point, and pace of development, would be the right way to go.

And with that, you know, all levels of industry and developers through the supply chain, I think will rise to meet the opportunity as we've seen on the East Coast. And with that support the goal ACP and B-Now proposed, of three gigawatts in 2030, with five gigawatts every five years, up to 18 in 2045. Thank you very much.

MS. AVALOS: Thank you, and I'd like to let the

audience know we do have time to continue with public comment and, a reminder to those on the phone, that if you'd like to raise your hand you can press star nine to raise your hand and star six to unmute.

So I'll give a little bit time to see if there's anyone else who would like to provide comments. Okay, we have one more commenter, Rachel Koss. Again, please spell your name and state any affiliation, and you may begin.

MS. KOSS: Thank you so much, Rachel Koss, R-A-C-H-E-L K-O-S-S, for the Coalition of California Utility Employees or CUE. CUE is a coalition of labor unions with about 40,000 members who work at most of the electric utilities in California and the employees of CUE's begin members build and maintain the electric infrastructure. This includes the transmission systems, and includes marine cable work. We really appreciate the energy Commission's focus on meaningful work force standards and creating good local jobs, and economic opportunities for local communities.

There has been a lot of discussion about how developers of offshore wind faced significant competitive market pressures. This is because there's no suitable port facilities for floating offshore wind. There's limited coastal transmission, and no currently

existing supply chain. So we expect bids in the auction to be exceedingly high, and we expect developers to cut costs wherever possible. We need to make sure that those developers that choose to take the jobs high road, are not at a competitive disadvantage.

So we strongly urge BOEM to level the playing field by implementing a multiple factor bidding system that incentivizes project wide labor agreements, which cover all phases of the project, onshore and offshore construction and installation, as well as the use of skilled and trained workforce.

Again, thank you so much for the Energy Commission's focus on these really important issues for our state, and we will be submitting additional comments and writing. Thank you.

MS. AVALOS: Thank you. And now, is there anyone else that would like to make any additional comments? Audience, you can raise your hand.

(PAUSE)

Okay, seeing that there are no other hands raised, I'll turn to Commissioner Douglas. And for now the closing remarks.

COMMISSIONER DOUGLAS: All right, well, thank you, Rosemary, and thank you to everyone who made additional comments and I think, you know, I do want to

say as I sit and reflect on this workshop, in addition to the thanks to all of the participants, a big thanks to everybody who's been on this offshore wind journey with us here in California since 2016.

And we, you know, and I very much look forward to continuing on it in my new role. It's —— it's a lot to process sitting here after 14 years on the Energy Commission and knowing I'm about to adjourn my last Energy Commission here, workshop as a commissioner. Certainly not my last Energy Commission workshop. But many thanks again to all of you. We very much look forward to your comments, and I very much look forward to continuing to engage with all of you in the offshore wind space.

So, with that, I think we really are adjourned and thanks again.

(Thereupon, the Workshop was adjourned at 3:20 p.m.)

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 4th day of March, 2022.

MARTHA L. NELSON,
CERT**367

CERTIFICATE OF TRANSCRIBER

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

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

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

MARTHA L. NELSON, CERT**367

April 4, 2022