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CALIFORNIA ENERGY COMMISSION

In the matter of:

Offshore Wind Waterfront Facilities Improvement Program	) Docket No. 23-MISC-01

STAFF WORKSHOP ON OFFSHORE WIND WATERFRONT FACILITY IMPROVEMENT PROGRAM

HYBRID IN-PERSON AND ONLINE BY PHONE AND VIA ZOOM

FRIDAY, NOVEMBER 3, 2023

1:00 P.M.

Reported by:

Chris Caplan

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ITEM

P R O C E E D I N G S

FRIDAY, NOVEMBER 3, 2023 1:03 p.m.

MR. HARLAND: So good afternoon, everyone. My name is Eli Harland. I work for the California Energy Commission, and I work in our Siting, Transmission, and Environmental Protection Division. Today's workshop is focused on the development of Offshore Wind Waterfront Facilities Funding Program that the Energy Commission is beginning to stand up.

Next slide, please.

Okay, before we jump in, I just wanted to provide a few housekeeping items.

First, this hybrid is -- or this meeting is a hybrid meeting with attendees in-person, as well as on Zoom.

We are in the California Natural Resources Agency auditorium. And anybody who needs to use the facilities, hopefully you found those out in the front of the auditorium on the right side of the doors.

I wanted everybody to know that this workshop is being recorded. We are also producing a transcript of the workshop today.

For those on Zoom, closed captioning has been enabled. And if you want to use this service, you can click on the live transcript icon. And if you want to stop

that, you can also just click on hide subtitle icon.

If you're in the room, please ensure that the doors remain accessible for folks who want to come in and out today. Again, restrooms and water fountains are off to the right in the hallways.

If an evacuation is necessary, please leave the building immediately to the nearest exit or as being advised. And the evacuation site for this CNRA building is the Roosevelt Park, which is located a couple blocks away on P and 9th Street.

And then throughout the day, we'll go over this, but there's going to be an opportunity at the end of this workshop for public comment. We're also asking for written comments to come through by November -- or by December 1st, 2023. So we tried to provide a little bit of ample time to react to today's workshop to provide those comments. I'll be providing instructions again throughout the workshop on how to submit those written comments.

And just wanted to bring to everyone's attention at the workshop today, we do have a website that we've developed specifically for this program. It was in the workshop notice. It's on the slides today, and you'll be able to see that a couple different times.

Next slide, please.

So our schedule today, if you didn't see it

posted yesterday online, we're starting with the welcome and introductions. We're going to hear opening remarks from state agency leadership. Following that, I'm going to provide a presentation on the work we've been doing to jumpstart the AB 209 Offshore Wind Port and Harbor Infrastructure Improvements Program. And then we're going to have a panel where we're going to hear perspectives from ports and harbors. All of those participants are sitting up here with me now.

We'll take a short break and transition to our second panel today. That panel is going to hear perspectives from private sector participants. And when that panel concludes, we'll go into the opportunity for public comments, have some closing remarks, and then we'll be done for the day and hopefully out of here early enough on a Friday afternoon for everybody.

So next slide.

All right, so I wanted to invite first Chair Hochschild to make opening comments, followed by Commissioner Monahan. And then after that, we'll hear from Jennifer Lucchesi.

Chair, over to you.

CHAIR HOCHSCHILD: Thank you so much, Eli, for all your work and diligence on this important issue. And welcome to everybody. I'm not sure who the gentleman is on

the right-hand side of the dais who is particularly well-dressed, but I like the outfit, and thank you to everybody for joining in person and online today. I'm David Hochschild, Chair of the Energy Commission.

I also wanted to just extend a special thanks to Jen Lucchesi from the Lands Commission, which is one of our sister agencies that plays just an absolutely instrumental role in this effort. And as we press forward to build a future that's 100 percent powered by clean energy with 25 gigs of offshore wind, you know, it will require a lot of new investment, and I think we're at a moment where industrial policy and climate policy are now really inextricably intertwined. And we have to, you know, begin with some really bold planning.

So this initial chunk of funding, this $45 million, is a great down payment on that, but by no means is it the totality of what's needed. But it is a really, really important moment, and we want to have a really robust dialogue to help us deploy these funds as wisely as we possibly can.

I also want to just offer my thanks to my colleague, Patty Monahan, who's been a wonderful partner on clean transportation and on ports, and her expertise is just tremendous in this area.

So with that, let me pass it over to you, Patty.

COMMISSIONER MONAHAN: Thank you, Chair. Well, it's a pleasure to be here. As Chair Hochschild said -- well, as he didn't say, I have a frog in my throat, but as he said, I'm the leader on transportation at the Energy Commission, and I've been convening the Ports Collaborative, which is a group of organizations in ports, to talk about the opportunities and challenges as it relates to port decarbonization.

And I'm really excited to work with you, Chair Hochschild, in helping, you know, matters related to ports and offshore wind, which is a really critical intersection. And we want to make sure, as the Chair said, this is industrial policy, we want to make sure we create as many good jobs here in California as we can. We want our goals (indiscernible) and this is a really important down payment on that engagement.

So California, as I think we all know, we're leading in terms of a 100 percent clean energy future for all, and offshore wind is a critical piece of that equation. So I don't know if you have seen the news that we are ahead of our new goals on vehicles, but we've reached 1.5 million zero-emission vehicles sold. We've reached our 10,000 EC fast charging goal two years ahead of schedule. And now the Governor's Office just announced that we hit 26.7 percent of all new cars sold in California

in Q3 as being zero-emission. So we're leading on all fronts, and offshore wind is a key part of this.

Like the Chair, I just want to thank all the staff, the division staff, including Eli, the director of the Siting, Transmission, and Environmental Protection Division -- (clears throat) if I can get my voice to go -- Elizabeth Hubert, for putting this workshop together. And just thanks to all the panelists, really looking forward to the day and the discussion to learning and to moving forward together.

So with that, is Jennifer here? I'm sorry, I guess --

MS. LUCCHESI: Yes, I'm here.

COMMISSIONER MONAHAN: Oh, great, Director. Do you want to make a few opening remarks on behalf of the State Lands Commission?

MS. LUCCHESI: Yes, I'm happy to. Thank you so much. And thank you, thanks to you and to Chair Hochschild for your leadership in all things offshore wind and transportation. And also want to extend my gratitude to Eli and the entire Energy Commission staff team who are working day and night to help uplift and support the new offshore wind industry that we're all working towards.

The State Lands Commission manages state lands and resources on behalf of the state. And as part of that

job, we also provide oversight over our ports, harbor districts, and working waterfronts who manage certain lands and resources on behalf of the state. And as part of that oversight, we really like to look at that as a partnership with our ports and our harbor districts and our working waterfronts to really fulfill and uplift the job that they have and ensure that they have the resources that they need to manage these lands and resources in an equitable and sustainable manner on behalf of all Californians.

And so it's been a real pleasure working with all the harbor districts and ports on this panel and many others that are probably listening in. And I'm really looking forward to hearing the various perspectives and ideas and thoughts on how we can deploy this initial funding.

We are looking at a funding requirement for port infrastructure to support offshore wind of $11 billion to $12 billion. So I really appreciate Chair Hochschild talking about this as an initial down payment.

And so just really looking forward to the discussion. And thank you for having me. I appreciate it.

Eli?

MR. HARLAND: Great. Thank you so much. And thanks to both the of Commissioners for attending, and Jennifer, for you being here.

Next slide, please.

Okay, so a core purpose of the public workshop today is to initiate a public process for implementing a new program established at the Energy Commission with the passage of Assembly Bill 209 that was part of the 2022-23 state budget. AB 209 is a major energy and climate change bill and it touches on several priority topics for a number of state agencies. Ports planning and development is one of many of those priorities.

Next slide, please.

So a section of AB 209 that was -- when it was passed, added what are called clean energy programs to the CEC statutes. And so the bottom of the slide there has a list of those clean energy programs that were added. One of those programs that were added is the program we're going to talk about today. But I just wanted to highlight that, you know, of those five, they really range from things like decarbonizing the industrial sector, decarbonizing food production, scaling up the use of hydrogen, electrifying end uses in buildings. So this program is embedded in a much larger policy push and direction on a lot of different fronts on energy and climate.

There are general provisions that were passed in AB 209 that apply to these five clean energy programs, and

so I wanted to highlight those first. Within those general programs -- within the general provisions, there are definitions that were added, some that apply directly into the program we're talking about today, but most of them are actually applicable to the other four programs. There are reporting requirements that are put on to the Energy Commission for the AB 209 programs, and we'll have our first reporting requirement due to the legislature in March, and then annually thereafter.

There are also statutes that touch on the applicability when talking about the use of any funding that is used for these programs, and some that are about specific allowances on the funding programs themselves.

One that I wanted to highlight is Public Resource Code section 25661. This is a specific allowance of funds that gives us authority to use up to 15 percent of funding that was appropriated to contract for or use an interagency agreement to obtain technical scientific outreach and administrative services.

I will mention that we have looked at this provision some, but our focus has been on how to implement the program with more of a direct assistance approach. But I wanted to highlight that because today we're going to be walking through most of the statutory framework. And there's sort of a box that gets developed with that

statutory framework that we need to operate within.

Next slide, please.

So specifically, the funding that was appropriated for this program came in the 2022 state budget. The clean energy programs that I just touched on in AB 209, those are really the statutory framework. So there's two moving pieces here. The first one is AB 209 and that statutory framework.

But the second one that is important for us to talk about today and to put out there is that the state budget itself appropriated funds to be used for those statutes. And in that budget act, $45 million was appropriated to the CEC for this program. About five percent of that was allocated for using for administrative costs at the CEC with the remaining balance for the program itself. So that leaves us with about $42.75 million to use as direct funding for the program. And $2.25 million is used for support, to support administrative cost of the program.

The state budget also did two other important things that we should put on the table that set an encumbrance deadline for this funding at the CEC before June 30, 2025. And encumbrance means that we have to have the funds committed to a certain agreement or spending pattern. And then following the encumbrance, the

legislature also set a liquidation date for these funds and that liquidation date is June 30, 2029.

So as we look at implementing the program, that's sort of the outer bounds on our schedule when it comes to committing the funds, but then also having those funds liquidated. And I'll note that all of those, the words that are used there are all before those dates. So it doesn't mean it's the schedule, it just means that that's our sort of outer bound of our schedule.

And so just wanted to make sure and touch on those broader statutory frameworks that were established so that we can begin to kind of flesh out how we go about implementing those as we read the language the way that it's written in the law.

Next slide, please.

So within the clean energy programs and within the specific statutes, there is direction that's established in state law. The first one is that there is language directing us -- or I would say language basically establishing and directing us to create a program. I'll paraphrase exactly what that language is because I think it's important to start with the way that the law spells this out,

> "The Commission shall establish and administer a program to support offshore wind infrastructure

improvements in order to advance the capabilities of California ports, harbors and other waterfront facilities to support the buildout of offshore wind facilities and maximize the economic and environmental benefits of an offshore wind industry in California."

These statutes don't go further to define how we are supposed to establish and administer a program and so that's part of the purpose of today. And the approach we are proposing to use at this point to get going is to use one, two or even more grant funding solicitations. I'll discuss more about what a grant funding solicitation is in a few slides from now.

Also the statute includes permissive language in which the CEC may adopt guidelines for the program. And at this point, as I mentioned, we're proposing to use the statutory language that's in place to create a grant funding solicitation. We're also having this workshop today and the public comment opportunity to help gather information that we can use to be able to help us develop this grant funding opportunity.

And then also importantly, the statutes do provide direction on eligibility as we establish this grant program. And to paraphrase what the statute says again, is eligible applicants shall include California port authorities, port operators, port commissions and their

respective authorized agents or other California waterfront facilities, and other entities that demonstrate a commitment to California offshore wind energy investments and are partnered with a California waterfront facility.

So we have direction on eligibility. I think we also have an opportunity on understanding what some of that terminology means and hearing, I think, from the participants we have in the workshop today as well as public comment on those.

Next slide, please.

So in addition to defining the program itself, as well as specifying eligible applicants, the statutory language also describes four allowable uses of the funds. Within those four allowable uses, the language includes three specific categories, which we'll talk about in a second, as well as one kind of, I would say, general allowable use. I'm going to read the statutory language really close to verbatim so that we can all have a common understanding of what, again, what the law says.

So as I mentioned, it's established three categories. The first category is called Category 1 activities in the statutes, and Category 1 activities are described as those that support the development of individual or regional retrofit concepts and investment plans. Category 1 activities may include planning,

feasibility analysis, business case development, environmental analysis, engineering and design work, and other offshore wind energy related planning and development activities.

Okay, next slide, Hilarie.

Category 2 activities, so Category 2 activities support final design, engineering, environmental studies and review, and construction of retrofits. Category 2 activities may support a range of retrofit activities to support deployment of offshore wind energy, including land expansion for component assembly, staging and transportation, facility updates, such as adding lay down and storage areas, increasing heavy lift crane weight and height capabilities, and other improvements to support the long term operation and maintenance of offshore wind generation facilities and other offshore wind energy related design and development activities.

That's a long sentence in the statute for sure, but I organized it in bullets up there. But if you do check the statute out, you will see that it's one long list.

Next slide, please.

Category 3. Category 3 is -- essentially, it says that we can provide cost share funding to an eligible applicant that receives a federal award for things that are

consistent with the two categories we just described. Allocated in this category, these are described as Category 3 funds themselves.

So those are the three categories that were established along in the clean energy programs in AB 209.

And then there's a fourth allowable use, it doesn't have a category assigned to it, but we can use these funds for preliminary engineering and environmental review work, including taking actions and preparing material to comply with the California Environmental Quality Act or other federal environmental laws.

So that is the statutory framework that we are looking to implement and those are sort of the background on what the statutes are. So I wanted to share a bit more about what we've been looking at so far.

So next slide, please.

Okay, so as I mentioned, we are looking at and starting to develop a grant funding opportunity to implement this program. The CEC uses several methods for different program solicitations. Some of you may have been recipients of those before or applied to those. Sometimes we'll use things like a request for proposals, invitation for bids, we've used block grants, rebates, and grants. And so what we're talking about today is implementing this program via a grant program.

And kind of the distinguishing characteristics, and this is by no means all of them, it just seemed like some of the important ones to share today so that we could get -- kind of take the statutory framework that we have plus this grant mechanism to understand how we go about developing something that turns into a funding solicitation.

And some of those unique things about grants, the CEC would issue a funding solicitation, and then it's on the responsibility of the applicants to respond to that solicitation. And you respond to that with your own project that would include an applicant's scope of work, you would include a budget for that scope of work, a project narrative, and a whole host of other things that tend to be a bit more template driven.

I've put a link on this website, if you haven't already seen this before, but the CEC has many funding opportunities. And on this link, you can go there and you can see what a grant funding opportunity looks like, or a GFO, to begin to kind of prepare or assess how we'll go about implementing this program through a grant.

So I just wanted to also highlight that within a grant funding solicitation, you'll also see things that sort of set up the rules for the funding solicitation. And you tend to see things like who's eligible to apply, a

solicitation schedule, we'll set minimum and maximum funding amounts, as well as, again, those application requirements, like a project narrative, a scope of work, budget. And then the grant solicitation also includes the criteria that will be used to evaluate applications.

And solicitations tend to be accompanied with what's called a pre-bid workshop. So this is after a solicitation is released and is live, we'll hold a workshop to present that solicitation and take questions from potential bidders or from the public. And typically, our practice is to release answers to those questions before applications are due.

And then applications are typically evaluated by a scoring committee. That committee uses the criteria that is published within the solicitation.

And following that review, the Energy Commission releases what's called a Notice of Proposed Awards, and we move directly into executing on the agreement and presenting that to our full Commission for their review and consideration at a publicly-noticed business meeting.

At this point, we do not have a live solicitation out. That's why we're doing this workshop now, so that we can help develop that solicitation. And throughout the workshop today, we'll do our best to answer questions and respond to questions. But for the most part, we'll

probably be able to take questions. And I'll be working internally with our Chief Counsel's Office, as well as our own transactions teams on considering what those questions have for us to think about.

Again, on the screen there is a link to where our main funding web page is. In addition to seeing examples of grants and other types of funding or processes, we have resources on that page that I would suggest becoming familiar with.

Next slide, please.

So we started to think about what a grant solicitation might look like. As I mentioned, there are requirements that are placed inside of a solicitation. And so as we're starting to think about these, the first thing that we have to do is we have to look at the statutory framework and say, okay, here are the statutes that were passed, here is the law that we have to implement. What would this look like inside of a solicitation itself?

And so after covering that background as well as what a grant funding opportunity is, I wanted to go in and start to share some of the things that we're thinking about in terms of requirements. All of this is open to public comments and discussion today. So this is merely something that we're considering but hasn't, you know, put itself into a grant funding opportunity at this point.

So I wanted to start with Category 1 and some of the activities that fall within the statutory language that we are considering for potentially making requirements, or perhaps bonus points, in one or more of these solicitations under this program. And again, we're interested in your comments, reactions regarding feasibility, practicality, the timing, any strategy, necessary funding possibly for some of these activities, or any other aspects of these.

So Category 1, some of the key words include things like planning and environmental analyses. And when we think about that in terms of developing ports and harbors and waterfront facilities to prepare for offshore wind, some of the immediate things that come to mind that are probably in addition to the more technical aspects of doing that, that aren't called out specifically, but planning and environmental analysis are things like identifying potentially impacted communities, creating communication engagement plans with those communities.

And we think of things such as those communities that are near ports and harbors where projects are being pursued include things like under-resourced communities, federal and non federally-recognized tribes. And we also think about users of ports such as the commercial fishing fleet and others that use ports.

Also, we think it's important in these early

stages to be identifying potential impacts of the proposed project or concept and strategies to address those. We've heard a lot in developing the AB 525 strategic plan. That's part of the framework actually of the AB 525 bill is the strategies around labor and workforce for that labor and workforce that's nearby ports and harbors. The potential for opportunities for, I guess, I'll say green manufacturing movement and construction or, you know, ways that offshore wind could be planned for and upgrades could support using, you know, low emission technologies and really using more advanced and alternative technologies.

And then also under the Category 1 where there's mention of creating business plans potentially with these funds, we think it's prudent to have part of that to be -- the funding to be used to come up with investment worthiness. An example of that could be a return on investment or a net present value to a level that public and private investors can make informed decisions.

So these are some of the requirements we're starting to think through for the Category 1 solicitation. And again, all of these are open to reaction and comments and your ideas.

Next slide, please.

Okay, again, going into Category 2. So I would say that a lot of the requirements that were shared for

Category 1 could equally apply in the Category 2-type grants. And we are interested again in comments and reactions regarding feasibility, practicality, timing, strategy, necessary funding, or any other aspects of these.

So in addition to some of those Category 1 examples that were provided, we also think that there could be some prudence, I guess, with working with OEMs, or original equipment manufacturers, as well as the offshore wind developers. And that probably is especially true for the current leaseholders and really want to kind of push that to be in a purposeful way, so maybe through something like a technical advisory committee or a team.

And then also a strategy around looking at the availability of federal awards and plans for applying to those federal programs. As I mentioned, there's the Category 3 that we have that can allow for match funding. We didn't run -- we don't have requirements that we've spelled out here today that we're thinking about because that seems pretty clear. But for those who are receiving funds for Category 1 or two, especially Category 2, being able to use some of the grant funds to come up with a strategy for applying for federal programs.

Next slide, please.

So we talked a bit about the requirements that we're considering in a potential solicitation under those

categories. And we're also starting to think through the criteria that can be used to evaluate grant applications. Again, the criteria is something that we are looking for your comments and reactions on, the feasibility of this, practicality of some of these, and any other aspects of them.

The criteria, if you do review any of the current grant funding opportunities or past grant funding opportunities the CEC has, there is a lot of standard criteria that's used to screen applications. But every solicitation also has its own criteria that it tends to focus on. And some of those common criteria are things like cost-effective. Sometimes you'll see things like in-state spending or other ways that the money is going to be spent and on who. So we might not be using the exact same criteria as some of those that are spelled out in some of those examples, but we will be thinking through criteria that is more specific to the program itself.

And so some of that specific criteria we're beginning to explore are things like how consistent an application is with some very key parts of the Assembly Bill 525 Strategic Plan. So in that plan, if you have not been following along or been able to read some of those key parts, the AB 525 requires the CEC to prepare a plan to improve waterfront facilities to support the development of

offshore wind. And so we're looking at if that plan is approved by the CEC at a business meeting, that we would really look to that as having some strong weight to guiding us in how we evaluate applications, so consistency with what's adopted there.

Further applications that include plans to consider benefits to under-resourced communities is something we could include bonus points for.

Another possible criteria is the ability of the applicant to meet the needs of the first five BOEM leaseholders. And so we might also include bonus points for any match commitment that applicants have.

Another one that I wanted to bring to everyone's attention that we're also thinking about the relationship between this funding program and a new statute that was just added this year by the legislature and signed by the governor is Assembly Bill 3, which directs the Energy Commission to prepare a second phase plan and strategy for seaport readiness. And that plan is supposed to build upon the recommendations and alternatives in AB 525.

The plan isn't due until December 31, 2026. So we may use ideas that are developed with the funds in this program as something that can help inform our work in AB 3. And we're looking at maybe potentially either using that as an evaluation criteria or possibly a requirement.

So again, these are all potential requirements in a solicitation. We still need to unpack these and determine their applicability to the statutes themselves. But part of that effort is the workshop today, as well as the public comment opportunity.

Next slide, please.

So these are questions that I hope that those who are preparing public comment, especially the written comment, we're hoping to hear some of the perspectives to these. These are by no means the only questions that we have or the only questions you may have. But these are consistent with some of the requirements that we just shared or the potential requirements that we just shared. And so we welcome your feedback and comments and, you know, I guess, challenge you to take us up on the questions that are here to respond to within your comments.

We do have interest in learning more about the federal funding awards that are there and those opportunities. I think at the beginning of the workshop, the Chair mentioned that this program is like a down payment to a much larger investment. And Jennifer, you had mentioned that, as well, in your opening comments. We also see the program hopefully as being able to position itself to attract federal investments. And so we'd be really interested in understanding how the work that would be done

by anybody who receives funds for this, how that work could help set up those applicants -- or those recipients to be able to attract federal funding into the state.

Next slide, please.

Next steps for us. We've begun to put together a state agency team that's helping us advise the program. So we are engaging with the California Coastal Commission, the State Lands Commission, the Department of Fish and Wildlife, the Governor's Office of Business and Economic Development, as well as the California State Transportation Agency. This is a small team that's there to help advise us as we go through the program itself.

We've also begun some informal outreach to ports and harbors, as well as the offshore wind industry. That's part of how the workshop came together -- part of how this workshop came together today is beginning to build relationships with a lot of the people that are on the panel with us today. And we plan to continue doing that informal outreach in addition to this public workshop.

There is a webpage for this program on the website, which is at the URL there on the slide. You can also sign up for a LISTSERV that we'll use to push communications out about this program. And there's also a separate public record docket that's been established that you can also access there.

If you've been engaged in offshore wind and the Energy Commission's process, we've used a single docket for offshore wind since 2017, I believe we opened it, 2016. And that docket is equally important, but we wanted to create one single place for the record just for this program.

And our next steps in terms of getting into the solicitation steps, we are considering an additional workshop in the future or some additional public process around possibly having out a solicitation concept or a paper that folks can react to. I think we want to kind of see how the workshop goes today and the public comments through December 1st before we know if we'll have to take that step to have an additional workshop.

We are thinking of one or more funding opportunities to come out in the first quarter of next year and being able to make any first grant awards by the second quarter of next year.

And throughout this, for us, it's really important to continue to have a public and transparent process around this program. One, it puts people who potentially could be applying to this on notice, but it also allows the public an opportunity to help us get the program implemented right.

And we're also going to be awaiting the AB 525

Strategic Plan, because as I mentioned, there is a key piece of that. That's a pretty wide-ranging -- it has a pretty wide range to that Strategic Plan, but there's going to be some really key parts and analyses that we're going to be relying on for this program to help inform us.

Again, public comments are due, we're asking for them, by December 1st, so please submit written comments. At the end of the slides today, I'll have a reminder on how you can do that. If you haven't submitted comments to the Energy Commission before, we have an e-commenting system. It makes it very simple to submit comments, at least I hope it's simple. And then I'll go over some other ways that comments can also be submitted.

Next slide.

And so thank you. That's my presentation. My name and email address are on the slide. My colleague Lizzie Barminski, who works with me in the Division, is also helping lead and implement this program. Her email contact information is also on this slide. You can reach out to either of us or both of us if you have questions. The URL again is on here for the program web page.

And that covers my presentation. So I think what we're going to do next is we are going to transition into a panel.

So next slide.

All right, that's a lot of names. This is great. So I first want to just say thank you to the ports and the harbors who are with us today, to Moffatt and Nichol, who's with us today. A few folks are online, so we're going to be transitioning between those in person and then those online.

This is the order that we'll go in for these presentations today. We're going to start with a presentation by Matthew Trowbridge, going over a lot of the work that Moffatt and Nichol has done in the last two years, I guess, he's probably covering. And then we'll go through individually, ports and harbors to hear perspectives on work you're currently doing, work you're thinking about doing, concepts that you have regarding improvements at your facilities to support offshore wind.

I will ask, because we are having the workshop transcribed today, that before you start your presentation, for the court reporter, please state your name and your organization.

And so I think we are ready to go into the presentations, and I'll pass it over to Matt.

And next slide, please, Hilarie.

MR. TROWBRIDGE: All right. My name is Matthew Trowbridge with Moffatt and Nichol. I really appreciate the opportunity to speak today. I'll be, as Eli mentioned,

touching on work that's been going on over the past couple of years, looking at California port readiness to support offshore wind. I'll be presenting -- all the information in these slides is based on federal and state studies that have been completed. Some of the ports up here on stage have been doing their own studies, their own work. That work is not included in this presentation. This is only covering the work that's been captured by the federal and state studies.

Next slide.

So we'll do just a brief introduction. We'll take a look at all of the California port readiness studies, as well as discuss the outcomes from the AB 525 Port Readiness Plan. And at the end of this set of slides will be the key takeaways from these studies, as well as work that has not yet been completed to date.

Next slide.

So a little bit about who we are. I work for a company called Moffatt and Nichol. We are port infrastructure consultants. We've been working in and around our California ports and our California coastline since 1945 when we worked to build up the Navy shipyards in Long Beach. We work pretty much all along the California coast and we've worked for essentially all of our California ports and harbors. And we focus on all of our

business lines in the ports. So offshore wind is one of those areas we focus on, but we also work for all the other types of cargo and terminals and facilities that are in and around our ports and harbors.

I'm a marine structural engineer by training. I do a lot of work in our ports in California and I have a specialty in offshore wind ports working here on the West Coast, working on projects in the Gulf Coast, as well as on the U.S. East Coast.

Next slide.

So this slide shows a summary of some of the key studies that were produced over the past couple of years, both at the state and federal level. And the first three studies were funded and completed by the Bureau of Ocean Energy Management. And these studies really are foundational studies that provide a lot of key information that led into the AB 525 Port Readiness Plan. The Port of Coos Bay study had significant industry outreach to developers and OEMs to understand what is the wind industry looking for in our ports? What do we need to prepare our ports to provide to the industry? And then there was two California regional port studies looking at our California ports.

Next slide.

Then this slide is showing all the same studies

on the left, but as we get into the State Lands Commission studies, there were two produced, key studies, by the State Lands Commission. The first one was looking at, okay, we've studied all of California's ports in those BOEM studies, but what if we build a new port or a new port facility somewhere on the California coast, what would that look like? What would that be? And is that a better alternative versus using our California ports? So that was the alternative port assessment. And all of that accumulated and was really summarized and built upon in the AB 525 Port Readiness Plan that was published in July.

And also of note, there was another study, a very similar study that was completed by the National Renewable Energy Lab that was a full West Coast port study looking at not just California, but also how could Oregon and Washington participate in this industry and how could additional gigawatts of energy that come online potentially in Oregon and Washington be available for California ports to participate in?

Next slide.

So why are we talking about ports when we talk about offshore wind? Well, just fundamentally, there's three main things that we need to make offshore wind go in California. The first is we need strong wind, which we have on our coast. We need an electrical grid and

transmission system that moves that energy from the offshore, 20 miles offshore, to the population centers. And we need ports and port terminals to provide the supply chain for this industry to get built.

And so it's really key that we have these port facilities, these sheltered harbor areas with large lay down space, deep navigable water, and really heavy load capacity that can allow the offshore wind industry to construct these turbine systems and then tow them fully assembled out to the offshore wind area where it will be installed.

There's an example of a turbine system shown in the upper right-hand side of the screen. To meet California's goals of 25 gigawatts by 2045, our California ports need to construct approximately 1,300 of these systems and deploy them offshore. So this is a significant undertaking that needs to occur in the next -- in the coming years.

One really key outcome from these studies is there is no existing port terminal on the West Coast that is currently configured or built in a way that can support the very heavy and infrastructure heavy demands that this industry needs. And so our ports have the space to support the industry but need significant investment to improve our port facilities such that we can build out these wind

farms. And it's going to require multiple ports and all the ports up here on the stage today to participate in this industry to realize this goal of 25 gigawatts by 2045.

One really key aspect of this program that as we develop these studies, one really key focus area is that this is a brand new maritime industry. And it's really important that when we look at building out this industry that we do not displace or replace any existing maritime users in our ports and harbors.

Next slide.

So some of the feedback that we received early on through a lot of outreach to the industry, to developers and OEMs, is summarized on this slide. And ideally in a perfect world, the wind energy areas, the port sites and the electrical demand, the population centers would all be located right next to each other, but that's just not the reality in California. We have wind areas that are far away from our population centers that are not necessarily -- the wind energy areas aren't necessarily as close to the ports as we would like.

So we have to figure out a way to make this industry work with the constraints that we have on where the wind blows, where our ports are and where our population centers are that are needing the energy. We need to plan for turbine systems that are up to 25 megawatt

in capacity and I'll talk about that in a future slide. Here on the West Coast we're talking about floating foundations. So in that bottom right hand corner of the screen, those are all the different feasible types of foundation systems for offshore wind.

On the West Coast our water depth drops off considerably very quickly, the Pacific Outer Continental Shelf drops out to a water depth that only floating foundations are feasible on the West Coast. And really, we're going to be focusing on two types of floating foundations, the semi-submersibles and the tension leg platforms.

One key thing we need to solve in the industry is figuring out how we transfer those foundation systems from where they get built in a port on land into the water.

And then another key requirement in this industry is that we have lots of wet storage space in our ports where we can safely moor floating foundations and integrated turbine systems. This really acts as a pressure relief valve or a risk mitigation for the developers when they're installing the turbine system to have extra capacity to mitigate the risk of downtime and weather and other types of congestion as they're moving these turbine systems to the final installation area.

Next slide.

Okay, so this slide shows the design turbine system that the industry has coalesced around. It's a turbine system that's up to 25 megawatts in capacity and our ports need to design to be able to accommodate turbine systems up to this size. So we're looking at foundation beam widths of up to 425 feet, and we're looking at water depths after integration up to 50 feet, and the blades that we're planning for from the water surface to the tip of the blade is approximately 1,100 feet off of the water surface.

Next slide.

This slide shows an approach that is most commonly associated with how we're going to build and deploy these turbine systems. It starts with step number one of basically fabricating foundation subcomponents and moving those subcomponents to a port facility where they will be assembled together to create the floating foundation.

That floating foundation will be moved from land into water. One method of doing that is shown on the screen, steps two and three, which is a semi-submersible barge where you roll the foundation onto the barge, move it to a sinking basin, sink it down, float the foundation off.

And then the next step would be moving that foundation system to a integration wharf where a heavy lift crane places tower sections, nacelle and blades on top and

eventually tows the fully completed turbine system out to the wind energy area. Possibly, before it gets towed, it may spend some time in wet storage.

And, also, I've mentioned steps two and three. There are a handful of other methods that are being evaluated for moving those foundation systems into the water.

Next slide.

There are a number of different types of port facilities that the industry needs to meet the state's goals. We're going to be focusing on a couple of these sites here in today's presentation.

One of the key types of sites that we're looking for is what we call a staging integration site. This is a terminal that will receive large wind components, stage them and then do the final integration, build the final turbine system prior to towing to the offshore wind area.

Another key site is what we call a manufacturing and fabrication site. That's a site that will receive raw materials. And the manufacturing sites at our ports, the reason we're talking about them is at a certain point in the supply chain these wind components get so big and so large and so heavy that they can only be moved by waterborne transit. They cannot be moved by road or rail and that's why they're so critical to be at our ports.

Another type of important site we'll talk about is what we call operation and maintenance. And these are really the base of wind farm operations where you're going to have workers moving to and from this facility and out to the wind farms on a regular basis to support the regular operations and maintenance of the wind farm.

And the last types of facilities that we'll touch on today are what we call construction support facilities which are the base of construction operations or areas where we can lay down components prior to going out to the wind area and installing the mooring lines, anchors, electrical cables.

Next slide.

Okay, this slide is showing a table of the types of demands on our port facilities for different types of uses. So on the left hand side of this table, the left two most columns is where we're looking at staging integration, foundation assembly, and manufacturing site uses. These are the most infrastructure-heavy demands on our ports. They require the most amount of space. They require the heaviest amount of loading, the most amount of most length of wharf. You can see a range of acreage here of 30 to 100 acres, but really the industry is looking for these types of sites of at least 60 acres. They'd really like to have somewhere between 60 to 100 acres for these types of sites.

And when we look at the loading requirements, the wharf loading requirement of more than 6,000 pounds per square foot, when we compare that to a typical container, about six times the capacity. So these are very, very heavy loaded structures that don't exist yet that need to be built. And that requires a big investment into our ports.

As we move towards the columns on the right of this table, we get into some types of infrastructure demands that are much more common in our ports. An O&M type use or anchor, mooring line, construction support, electrical cable, lay down sites, those sites can be accommodated much more easily in our ports without as much investment as the two left most columns.

Next slide.

Okay, so one of the big outcomes of the AB 525 port readiness plan was an identification of how many port sites do we need to meet the state's goals? And do we have enough locations within our California ports to meet these needs?

And so this table and the report really assume the worst case. If we tried to locate all of the Tier 1 manufacturing sites in California, if we attract all of that manufacturing to California, that we build all of the blades, all of the towers, all the nacelles, all the

foundations and subcomponents here in California, how much space would we need? And the big outcome from this is that when we looked around at the ports and did a lot of outreach to our ports, we found that, yes, our ports and harbors are very well positioned to support the state's goal, even on this conservative assumption by 2045. But the key aspect is that there's adequate and timely funding into our ports in order to help meet these goals.

Just a side note on these, when we talk about number of sites for these studies, we're assuming, especially for the larger types of sites, the S&I and the foundation assembly, we use an average size of a terminal of about 80 acres. We call that a site. And that's a way that we can reference across studies to show how many types of these sites we need.

Next slide.

Okay, so I want to present a couple of slides here on the key takeaways from these studies. We need to plan for turbine systems, 15 to 25 megawatts of capacity.

One big takeaway is that these types of projects in our ports are not commercially viable using traditional port business and financing models. The cost of these terminals and infrastructure demand, the financing available cannot be done on leasing back and earning back the revenue through leasing, so it's very important.

And really this is what you saw on the U.S. East Coast, all of the port improvement projects on the East Coast had significant state and federal funding in order to get the ports ready to support the industry, which then unlocks the economic impact and jobs to the state.

So with that adequate investment in our California ports, we will be ready to meet the goals of 25 gigawatts by 2045.

The most urgent funding need in our ports is those staging integration sites. They are the absolute most critical sites that need funding as soon as possible because they're going to be the first sites that need to be developed to support the industry.

The manufacturing sites are also critical, they're also important sites because when we develop those sites, we're maximizing economic benefits and job creation for the state.

Next slide.

The study, when we looked at all of the ports in California, it boiled down very quickly to three sites that would be potentials to supporting staging integration and really those are Port of Humboldt, Port of Long Beach and Port of Los Angeles. And the ports will talk about it today, but Port of Humboldt and Port of Long Beach have progressed their projects pretty far to date and are in the

environmental document and preliminary engineering phases of their projects in order to prepare them to support S&I for the state.

Next slide.

So some of the key takeaways. To get to that gigawatts by 2045, the report estimates that we need three to five S&I sites and four foundation assembly sites. Each of those sites needs to be at least 40 acres. And it's likely for the S&I sites that we really need somewhere like four to five of those. Three would be if everything was absolutely perfect and there was no inefficiencies in the system.

So when you add up all this acreage for the demand, you see that you really need all of the acreage that Port of Humboldt and Port of Long Beach can provide in their projects. You really need both projects. And if you don't have both Port of Humboldt and both Port of Long Beach providing S&I and foundation assembly, then it will not be possible to meet those state goals.

Another key takeaway is that while it may be feasible to build a new port in central California, it would be possible to do that, that would be a significantly more costly endeavor. It would create more environmental impacts and have a much longer development schedule than if we build inside of our existing ports for staging

integration.

Next slide.

One key point on this AB 525 work was that there was a detailed towing assessment that was done. And what it found, the really big key takeaway here was that it's feasible to tow fully assembled floating turbine systems from any of the S&I ports in California to any of the wind energy areas. So, you know, in practice, this means that Port of Humboldt can move turbine systems from Port of Humboldt to the northern California wind energy areas and the central California wind energy areas and vice versa. Fully assembled turbine systems could be towed from Port of Long Beach to both the central and northern coast wind energy areas.

And not just that it's feasible, but also that it's really going to be needed when we look at a demand and capacity equation. You know, Port of Humboldt will be coming online sooner. Their project is anticipated to be done sooner. And so it's likely that they will need to be towing to Morro Bay until Long Beach is built and vice versa. Humboldt does not have enough capacity to build out all of the north coast wind energy areas and all the north coast capacity. So it will need -- it will require Long Beach to send turbines up to the north coast in order to meet our goals.

Next slide.

For the manufacturing ports, there's a figure here showing all of the key options for manufacturing within the state. These are the ones that provide that significant job creation economic impact. And you know, from San Diego, Long Beach, LA, the Bay Area ports and Port of Humboldt are all positioned to support manufacturing supply chain. And this key question that Eli touched on with AB3 is really how much manufacturing, how much supply chain is the state going to incentivize to happen in California? And this will drive how many of these ports are participating in the supply chain.

Next slide.

For the O&M ports, we estimate that the state's going to require somewhere between 9 to 12 -- 9 to 16 sites. Each of those sites has a berth to support O&M vessels and some upland lay down area. Sites would be needed both on the north coast and the central coast. And it's possible that you could have multiple sites within the same port. So for example, Port of Humboldt may have a handful of O&M sites supporting all of those north coast wind energy areas.

Next slide.

Okay, so for the cost, and Jennifer touched on earlier but when we add up the estimated improvements into

our ports to meet these goals, we get to a total cost of around 11 to 11 to 12 billion dollars. And we've broken it down in this table to show each type of site use. And you know, the key here is that, again, we're driving all of the manufacturing investment in the state. So this is what we anticipate to be the maximum investment requirement for manufacturing within the state.

There's a couple key assumptions here. These estimates are done in 2023 U.S. dollars, so they're not accounting for inflation. There's a 50 percent contingency on these numbers in that they're early estimates. There's not been engineering work done to drill down on the accuracy for these numbers, so it carries a high contingency as well as a high accuracy band.

These costs are only for port improvements. So basically anchor bolts down, this is dredging, sinking basin, wharf, land creation, those kind of things. It doesn't include above grade improvements like equipment costs like cranes, SPMTs. It doesn't include buildings and things like that. So there are some additional investments that are not accounted for in these numbers.

And there's a handful of other assumptions in the final report that I would reference to.

Next slide.

Okay, so what was not done as part of this work

to date in these state and federal studies? Well, one of the big items that hasn't been done yet is a really good assessment of our shipyard capability to build out the full fleet of vessels that's required to support this industry. There are going to be a lot of vessels that need to be built from tugs to O&M vessels, barges, semi-subs, cable lane vessels, and crew transfer vessels and service operation vessels. So there's a lot of different types of vessels to be built and somewhere we need to confirm that there's enough capacity in the U.S. to meet the needs and have these vessels ready in time to serve the industry.

There was a handful of port space or port capacity items that were not captured in these studies. We didn't look at port space required for home port services for the tug fleet. We didn't look at space in the ports required for end-of-life decommissioning. So at the end, you know, after 20 years when these turbine systems are done, they'll need to be probably towed back to a port and they will need to be some space in the ports to accommodate that decommissioning process.

There's some additional demands in our ports, flexible lay down, Tier 2 and Tier 3 manufacturing supply chain, which were not studied.

And we also didn't look at the offshore electrical substations and where those will need to be

built. Those may also require some port capacity in the state.

And then as already mentioned, how much of our supply chain and manufacturing will be incentivized and built into California versus, you know, we studied 100 percent. It may be something less than that.

So with that, I think that's the end of my slide deck. And again, I really appreciate the opportunity to speak today.

MR. HARLAND: Great. Thank you so much, Matt, and more exciting than running through a bunch of statutes to see that, so appreciate it. And also apologies, Matt, we integrated your slide deck in there and I noticed some of the formatting was off. So usually you have an impeccable slide deck. So sorry about that.

And so next up is going to be Rob. And speaking of slide decks, Rob, you're going to be able to pull up your own because it would have been impossible to integrate that into our slide deck. Again, before your presentation, your name, organization for the court reporter. And if you can keep it right around ten minutes, that would be fantastic.

MR. HOLMLUND: You got it. I'm Rob Holmlund, development director for the Humboldt Bay Harbor, Recreation & Conservation District, also known as the

Humboldt Bay Port Authority. And I'm going to jump right into this.

So let's see, just a quick introduction to Humboldt Bay, way up in the North Coast. Some people may not be familiar with what we've got going on. So here are the two lease areas that currently have been leased off the California coast. And if you zoom in on the northern one, you can see Humboldt Bay right there in very close proximity to the Humboldt lease area.

The Port of Humboldt Bay is situated in a beautiful part of the country. You can see all the trees there. Just to the north of us is Redwood National Park and south of us is Redwood State Park. We have a really rugged coastline. But the Port of Humboldt Bay is a port of refuge that kind of interrupts that rugged coast to the north and south of us.

It is a mecca of recreation, a lot of kayaking and conservation programs that we work on throughout the bay. And we have a very active commercial waterfront. The largest fishing fleet on the north coast. The majority of oysters in California are produced in Humboldt Bay. We receive cruise ships every year.

But what we're known most for as a port is the wood product and timber industry and export of those materials. And we have a long legacy in the bay of break

bulk related to wood products. And in the 1990s, a lot of these sites were still active. But 2008 or so, one of the last mill sites on the bay closed. And the industry really hasn't seen its peak since the 1950s, 1960s.

So this is the site I'm going to be talking about in a moment where our offshore wind project is proposed. And you can see just the density of activity at this site. It was the largest employment center for three consecutive generations in the region. And if you keep your eye on that redwood dock to the left there, this is what the site looks like now. It's effectively vacant. And so a place that was, you know, a job center for multiple consecutive generations is now effectively vacant.

Zooming out and looking at Humboldt Bay, we -- so there's the city of Eureka, cities of Arcata -- or City of Arcata and Cal Poly Humboldt University up there, the College of the Redwoods, and the Wiyot Tribe just for context.

If we turn this map to the right, north is to the right, and overlay this map on top here, you can see the teal areas are the federal navigation channels maintained by the Corps of Engineers. And the purple areas are those coastal-dependent industrially zoned lands that were almost entirely related to the wood product industry. And with this point, we have about 300 to 600 acres of vacant or

heavily underutilized industrial lands. The green area is among those and that is the project site I'm going to be talking about.

And so this is a Master Plan from several years ago to envision what we could do at that site. That came from a study over ten years old, where we looked at this site, what could be done with it. And so there was a whole lot of evaluation over ten years ago of cargo dock, aquaculture, but notice that we even back then were evaluating offshore wind.

And so based on that initial study, when offshore wind really started to heat up, we received a $65,000 grant from the Humboldt County Headwaters Fund to advance this concept. And then utilizing money, a grant from the State Lands Commission, $500,000 in 2021, the California Energy Commission realized that we could be getting somewhere with offshore wind and granted us a $10 million grant to advance this project.

We leveraged that money and just announced this morning, we have received a Port Infrastructure Development Program grant for $8.5 million. So altogether now, we're just under $20 million, which gets us about one-fiftieth to one-one-hundredth of the way there for our project. So we have a long way to go. We did submit a over $400 million grant with a $400 million private match. And we should

hear about that in December or January. And then, you know, future grants opportunities, we are evaluating many of them. And obviously we're looking to stimulate private investment through all of this public funding.

So this is one of the latest drawings of the concept. We actually have more complex drawings, but they're not quite polished enough for this presentation, so it's easier for me to use this one.

And so just for a review of what we're looking at to do in our project here, we have 600,000 square feet of manufacturing, so for instance, blade manufacturing there. But also acknowledging that, as Matt's presentation pointed out, staging integration is the most critical. And so if we could maximize the whole site for staging integration, it's more likely that all of the components could be manufactured in other ports throughout California and shipped to this site.

And our general philosophy is there's enough wind to go around. So we believe in all of the other ports projects, heavily and consistently supportive of all of their projects. And so we can receive our manufactured components from elsewhere.

Same with the floating foundations. You know, this is an assembly line of putting them together, but you can see on the far right that we would be receiving

components from other ports. And so this is a floating foundation here in the bottom right-hand corner. You can see a little person. So these are really massive pieces of infrastructure.

So coming in, going through this assembly line, once it's fully assembled, then go onto the semi-submersible barge where it is launched into the water. And then once the floater is in the water, then it can be taken over to a wet storage area, so it would be sitting in the bay, or immediately taken over to the wharf and crane here where vertical assembly would occur. And so you can see some samples from other parts of the world where the vertical assembly process happens. Each of the tower sections go up, then the nacelle, then the blades are put on.

Once everything's fully assembled in the water, then it gets towed from there out of the bay to the various lease areas, either Morro Bay, Humboldt, or future lease areas. And honestly, before it gets towed out, it would likely come over here to an on-terminal wet storage area for final inspection and completion before it's towed out. Then we have a whole other wharf doing the exact same thing so that we can do two of this arrangement simultaneously.

We're actively working on tow-out modeling, and there's quite a bit going on with the project right now.

And as we understand, a lot of these turbines, once they're out in the water, will need to come back into a port for maintenance. And so our site is set up to be able to handle that level of operation and maintenance for the facilities as well.

Looking deeper into the future, you can see future Oregon lease areas and the proximity of Humboldt Bay to those. But you can also see that just north and just south of Humboldt is the best wind resources on the west coast of the United States. So the two lease areas that are currently in the water of California are not enough for the state to reach its goals. And so we anticipate that future lease areas will be very close to Humboldt. And this is from an NREL study several years ago that points out areas of interest in Del Norte and Mendocino validating our assumption that we will be very close to future lease areas.

Also thinking about towing distances, I just threw this together this morning and looking at a radius from Long Beach, a radius from Humboldt and where the various, you know, current Morro Bay and Humboldt wind energy areas come in relation to tow distances.

So a quick status report on where our project sits at the moment. Our Board has approved a project labor agreement. We are working closely with the county of

Humboldt Economic Development Department, the Cal Poly Humboldt, and College of the Redwoods on a workforce development strategy.

We are deep into a business plan. We are actively engaged with seven different tribal governments, meeting with some of them on a weekly basis at this point.

We adopted a community engagement strategy this past June. And so we have identified dozens of stakeholders and engaged with fishermen and a long, long list of different community members. We are working on establishing a community advisory committee, a community benefit program.

We're deep into CEQA NEPA permits and 30 percent design. I should say that using the California Energy Commission grant, we did a competitive bid process and hired Moffatt & Nichol, who has been with us since March of '22, and they are leading all of these permitting and design efforts.

Just yesterday, we spent three hours with 48 different agency staff from 11 different agencies, every agency that's going to be issuing a permit to this project, had a really productive meeting on mitigation planning. We have a robust eelgrass mitigation strategy.

We were working on a green terminal plan. Working with the county, an Enhanced Infrastructure Finance

District has been established at the project site and around it.

Looking at project schedule, I'll skip over the detail. Just in summary for schedule, we plan on completing CEQA NEPA and permits in Q1 of 2025. The mitigation construction could begin in late '25. Phase one project construction beginning in '26, and ready for operations in 29.

So in conclusion, I think I'm under ten minutes here, I think, what we would do with AB 209 funds, marine geotechnical work is more complex than we initially anticipated, so we could use help with that.

Mitigation land purchase, after our meeting yesterday, it's become apparent that we need to purchase some more mitigation land.

We'd like to enhance our green port initiative and zero emissions planning. We have planned ground mounted solar. This project site includes what was formerly a paper mill and has large ash landfills, which are perfect for ground mounted solar. Nothing else can really be done with those. We could use help with microgrid planning and implementation.

Berth sediment management, management site we could use help with, near-shore restoration, and obviously, we would like to use state funds to match federal funds.

So we have a website dedicated just to this project. We also have a YouTube channel with an hour-long YouTube video that goes into much greater detail that you can find there.

This is a simulation from years ago from Aker Offshore Winds. We have more new enhanced visual simulations from a lot of different perspectives, ground-based views coming this coming February.

And that is what I have for you today.

MR. HARLAND: Great. Thank you, Rob. Really appreciate the amount of content you just covered there so quickly.

So we're going to move on to the next presentation, so we're going to go from the north coast and we're going to go down to Southern California, actually, it's just to the side of me down here, but really Southern California.

So Suzanne, your slides are up and just your name and organization for the record. Thank you.

MS. PLEZIA: Thank you, Eli. Suzanne Plezia, Senior Director, Chief Harbor Engineer at the Port of Long Beach.

So first I want to start by commending the CEC and the State Lands Commission for the critical work they've been doing on AB 525 Strategic Plan. And thank you

for providing me the opportunity to share with you today the Port of Long Beach's plan to support California in developing offshore wind.

Next.

And, of course, first I want to start off by giving a little bit of background on why offshore wind is important to the Port of Long Beach, and it starts with our commitment to the environment as the green port. We're transitioning our operation to zero emission over the next decade and forecasting a six-fold increase in annual power consumption associated with that.

Now, of course, in order to be successful in doing that transition, we are going to need California to be successful in developing offshore wind so there's sufficient, reliable, renewable, resilient energy in the grid as we plug more of our operation into that grid. And of course, the cost of that energy is going to be critical to our business. So facilitating the lowering of -- lowering the cost of that offshore wind energy is critical to our strategy.

Next.

Now, floating offshore wind port requires a lot of land, and this port facilities, they're very expensive to build. So when we build them, we want to make sure that they can facilitate and accommodate future innovation.

Next.

And that is why we focused in on the 20 to 25 megawatt turbine. The larger that turbine, the more efficient, and it achieves economies of scale and increasing the amount of energy we can produce in our wind lease areas using fewer units to operate and maintain. So this means we need less sea space to reach our energy goals with less impact on the marine environment and fishing community while lowering the cost of that energy being produced.

Next.

Another key focus area for us is on the foundation. It is nascent technology. There's a lot of designs out there right now, and no facility is producing them at the serial production rate we need for our commercial floating offshore wind farms.

Now, the NREL estimated that the foundation is around 40 percent of the CAPEX. So the floating foundation represents a huge opportunity to lower the cost of offshore wind energy through innovation and efficiency in both the design and the production.

Next.

And now I want to focus on why the final assembly and integration sites are the key in a multi-port supply chain network.

Next.

Now, these sites are used by developers for about two to three years to develop a wind farm. And being in the port world, a two- to three-year lease is an extremely short lease time.

Next.

This is where the Tier 1 components are delivered by water from those manufacturing ports and staged on the land.

Next.

Meanwhile, the sub-assembly parts for those foundations are also delivered to the foundation assembly site -- next -- where those pieces are then assembled into the foundation on the land.

Next.

And then it needs to get from the land into the water, which we're showing the semi-submersible barge strategy that sinks down, and the floating foundation then floats off and is pulled over to the key.

Next. Oh, can you go back? Sorry about that. Oh, we're already at the end of my time here. So let me just finish out here.

Once they're fully assembled, they're then towed out to the wind farms once the mid ocean and conditions and weather are right. And of course, that production rate

that we're seeking at each of those 80-acre staging integration and foundation assembly sites is one of these per week.

Now, the reason I focus in on this is because the entire multi-port supply chain network flows through staging integration. And we're going to need sufficient throughput capacity at staging integration to meet those offshore wind energy goals in time.

The other key aspect of it is we'll need that sufficient throughput capacity to also unlock manufacturing at the other port facilities in California, like San Diego and our Bay Area ports. Those manufacturing ports are not going to be viable without sufficient staging integration throughput capacity. And that is why the multi-port strategy must first start with establishing the staging integration at Humboldt and the Port of Long Beach.

Next slide.

So as Matt already went over this, the AB 525 Report concluded that those staging integration sites are the most critical element of the multi-port strategy. Humboldt will absolutely play a critical role, which we just heard about, in developing offshore wind. And the Port of Long Beach is absolutely supportive of Humboldt's endeavors.

But to achieve California's goal, we'll need

additional assembly and integration sites beyond Humboldt. It's infeasible and impractical to construct a new port in the Central Coast to meet that need. So only Pier Wind can provide that need that will complement Humboldt and achieve all of the state's goals.

Next slide.

And the reason is because the Port of Long Beach has unique qualities that can meet the scale of floating offshore wind. There is no other place on the West Coast that you can cite the size of land that we will need to meet those goals.

Next.

And being part of the largest industrial port complex in the nation -- next -- it's this area in our outer harbor that's deep, calm water.

Next.

It's behind a federal breakwater -- next -- and adjacent to one of the deepest and widest federal channels with direct access to the open ocean and no air height restrictions. And it is out of the way of our other operations.

Next.

We also have a large local workforce -- next -- an extensive transportation and supply chain logistics system -- next -- and we have a successful track record of

delivering these large marine infrastructure projects.

Next slide.

The concept we developed is called Pier Wind. It would be the largest purpose-built offshore wind facility in the United States. It is large enough to support that high production rate for both state integration along with the foundation assembly sites, and plenty of area around the facility for wet storage, which is important to disconnect the serial production at the key from the tow-out operation, which is variable. And the longer the tow distance, the more variable and the more important wet storage becomes.

And all of these features are designed to help facilitate an efficient operation and achieve those economies of scale that will help lower the cost of that energy. And in keeping with our zero policy, it will be the cleanest, greenest offshore wind terminal in operation.

Next slide.

Our concept is a gray terminal that can be divided up to meet the most critical need for staging integration and floating foundation assembly, and flexible and adaptable to meet those changing needs over time as innovation and technology advances.

Next slide.

So when it comes to schedule, time is of the

essence, which is reflected in our proposed aggressive delivery schedule. In order to achieve this schedule, we will need the whole of government supporting it.

Next.

The cost for the entire 400-acre site is estimated at $4.7 billion in 2023 dollars.

Next. And I'll just wrap up on this one.

This strategy is much more cost effective when we need that much land to deliver one 400-acre site than five separate 80-acre facilities.

Next slide.

Now because schedule is important, we have been pushing forward very aggressively at risk so we don't lose this momentum as part of the whole of government that's going to be needed to develop offshore wind.

Next.

This means we will need to do a lot of activities in parallel to try and compress that schedule as much as possible. And this takes a lot of resources, which we have been onboarding during this interim period while the CEC works through the distribution of this $45 million grant. We will need a significant portion of those funds in order to continue these activities and maintain our aggressive schedule.

I'm going to go over some of the key elements

that are underway.

Our CEQA NEPA is well underway now. It'll be a joint document with the Port of Long Beach as the CEQA lead and the Army Corps as the NEPA lead. We're continuing to develop the design and perform the technical studies needed for the CEQA NEPA analysis.

We've onboarded resources to support a robust community engagement and outreach plan with the community advisory group and a technical expert panel.

We've been meeting with our workforce development partners.

And the important element I want to focus in on is our Business Finance and Delivery Plan. We've brought on financial consultants to evaluate different business and operating models and those revenue streams, a funding and financing options, and potential project delivery models. And we anticipate completing the draft plan by the end of December.

Because these lease terms for the S&I are so short, and those leases don't happen until well into the future, but they can't happen at all unless we build staging and integration, we believe public funding will play a pivotal role in the staging integration sites. But there's a huge return on an investment for both the environment and the economy by enabling offshore wind

development and the multi-port supply chain system.

And we want to partner with the state on funding and financing solutions that balance out the state's goals and the costs passed on to the ratepayers for this infrastructure. And partner on a federal funding strategy. A key element for the port to be able to leverage that federal funding will be strong support for Pier Wind from the state.

Next slide.

But if that happens, the benefits of Pier Wind come back to scale. It's the economies of scale of building the largest purpose-built offshore wind facility in the United States that is big enough to build the largest floating offshore wind turbine in the world at an efficient serial production rate to achieve the economies of scale that will accelerate the reduction of greenhouse gases while lowering the cost of that energy and unlock manufacturing to create that industry cluster that will maximize jobs and economic benefits, all of which will position California and the United States to be at the forefront of floating offshore wind development.

Next slide.

Now the reason I start with our zero policy is because of how offshore wind fits into the vision, supporting the generation of that renewable energy that

will feed the grid that connects to our terminal operations and Pier Wind and charging for much of the transportation within our harbor. And as a partner with the state on ARCHES, it will support green hydrogen generation that will help us decarbonize the hardest parts of our transportation sector within the harbor, including the large vessels that call out the port. And our partnership with the state is key for us to be successful together in transitioning to green energy and a green economy.

Next slide.

So in summary, Pier Wind, we believe, is a critical piece and a larger puzzle that will need to come together in a wholistic strategy for offshore wind to be successful. Pier Wind is designed as a system solution that enables a multi-port strategy. Manufacturing is not viable without it, and it can't be done anywhere else.

Time is of the essence. California needs to be bold and decisive and send a strong signal of support for Pier Wind with significant portion of the grant funding. And together, we will achieve environment, energy, economic, and equity goals.

Next.

Thank you for the opportunity to present today.

MR. HARLAND: Thank you for the presentation. And I see why you were hoping to be able to run it

yourself, but I thought that between your next and Hilarie Anderson, who's running the slides, you guys are really in sync there, so, yeah. But thank you so much for making the trip and the presentation.

We're going to transition now to Zoom for our next panelist.

Mike, it's going to pass it over to you if you can just state your name and organization for the court reporter?

MR. DIBERNARDO: Yes.

MR. HARLAND: And you should be on.

MR. DIBERNARDO: This is Mike DiBernardo, Deputy Executive Director here at the Port of Los Angeles. And a great presentation by Rob and Suzanne. Definitely well ahead of some of the things that we're doing, but really appreciate the opportunity to speak to this group.

So if I could share my screen real quick, I would appreciate it.

MS. ANDERSON: You should be able to go ahead and do that.

MR. DIBERNARDO: Let's see. One second. Having a little bit of a -- okay. There we go.

So obviously, I don't have an elaborate presentation, such as my colleagues at the other ports. But what I'd like to share with you, and hopefully you guys

can see my screen very well there, but at the Port of Los Angeles, we definitely are interested in getting involved in wind turbine production and recognizing that what Matt said in his presentation, that the key ports are the Port of Long Beach, Port of LA, and Humboldt Bay, we can look at some opportunities here and obviously use grant funding to help us with some of these studies.

We have two potential sites that are probably ideal for staging and integration, as well as some manufacturing. We have a former Southwest Marine, which is a former shipyard. It's approximately 27 acres. We would have to do a little landfill there that you can see on the south side of that dot that would fill in those spots to get 27 acres. And we estimate that cost to be about $350 million, where about 36 feet of water depth there with 1100 linear foot wharf. So that would be a potential site that could be used for, again, staging and integration and some manufacturing.

The other facility that's a possibility is right next to what Port of Long Beach was saying with their Pier Wind project, which would be a pure 500 landfill. We estimate that about 160 acres. Currently the land that's there is about 15 feet below water. So it doesn't have all the environmental credits to come out of water but it could, securing enough credits to do that. And that's

estimated to be about $2.1 billion. That was going to be -- about ten years ago we did a study for a potential container terminal there. So it would have been the size -- the wharf length would have been sized to handle two of the largest container vessels, so probably over 2000 linear feet of wharf, maybe even longer.

But these are the two sites that we can potentially consider for this grant. And, definitely, we would consider using this grant money to do further studies on these two sites.

So that's all I really have at this point, not as elaborate as Rob's presentation, which I thought was very impressive, as well as Suzanne's. But this is what the Port of Los Angeles could discuss further, and we appreciate the opportunity.

Thank you.

MR. HARLAND: Great. Thank you so much, Mike, for being here. And if you're able to hold on for a little while, I know that you have a constraint, but that would be great to have you have you on, so appreciate it.

MR. DIBERNARDO: Thank you. I'll stay until 3:00, and then we have a colleague that's still on, and then I'll come back after my three o'clock meeting. Thank you.

MR. HARLAND: Okay. Great. All right.

So now we're going to move back up north, I guess. So our next panelist is Simon from the Port of San Francisco, Simon, your name, organization. And I think you saw the drill there, but just letting Hilarie know when you go next.

MR. BETSALEL: Hello, my name is Simon Betsalel. I'm Capital Projects manager with the Port of San Francisco. Thank you for having us join you today. Exciting to hear about all the other ports activity and the ambitious projects we have online.

Next slide, please.

So first, a little bit broadly about the Port of San Francisco. We're a little different than the other ports in the state in that we're sort of more of a linear jurisdiction versus a concentrated industrial port. Like Rob mentioned with the Port of Humboldt, industrial activity at our port really peaked in the '50s and '60s. Now we're a mix of commercial fishing in the north, as well as tourism, running through commercial, residential, recreational, down to the southern waterfront where our legacy industry still resides, adjacent to a number of historically underserved populations, Hunters Point and Bayview.

So next slide, please.

So San Francisco has a few opportunities, I

think, to contribute to offshore wind. Unfortunately, because of the bridge heights of the Bay Bridge and the Golden Gate Bridge, we're limited to manufacturing, as well as operations and maintenance, but have a few facilities that could help these efforts.

So Pier 70 is a former shipyard. Pier 80 is our current break bulk terminal. And Pier 94 and 96 and the upland area are where we have concentrated our effort to date, and I can explain that in just a second.

Next slide, please.

But first, Pier 70 and Pier 80. Pier 70 on the left could be used for operations and maintenance, as well as administrative offices. This site specifically is the most integrated into San Francisco, adjacent to a lot of restaurants, apartments, and kind of potentially very good asset for workforce. Pier 80, currently used for importing and exporting of vehicles, could be used for offloading large offshore wind components and indoor-outdoor storage.

Next slide.

And then Pier 94 and 96, this is where we've had work to date. We envision this as being a contiguous, nearly 100-acre site dedicated specifically to offshore wind. It's in usable condition now, but we have some planned upgrades that we've begun working on. This is also designated as a FEMA emergency site for the Bay Area, so

we're leveraging some hazard mitigation grants from FEMA to begin our design work here. But envisioning a five-acre, 6,000 pounds per square foot wharf, nearly 1,500 feet long, and then a 90-acre upland area with soils improved to 3,000 pounds per square foot.

Something unique about the wharf is that it's hopefully expedited. We don't need to fill any land. It's already zoned and approved for industrial usage. And the wharf has an existing deepwater depth and is adjacent to the San Francisco Bay that could be used for sinking foundations and preparing these components. And it's also closely located to highway, as well as an intermodal rail storage yard just to the left of this green upland area.

And then this site, specifically Pier 9496, is part of our Eco-Industrial Maritime District, where we tried to co-locate industrial activities so they can complement each other.

Just to the north of this site is a concrete batch plant and aggregate importer. They supply the majority of the construction materials for San Francisco's concrete buildings and could easily help support creating floating foundations depending on technologies that were chosen.

Next slide.

So currently, we have just completed a concept

report outlaying a potential schedule and investments needed. We're preparing an RFP for design, so AB 209 could help fund that design work as we advance our proposal and start permitting. We're taking this presentation and our intentions to the Port Commission, our governing body, in two weeks. And our Maritime and Legislative Affairs staff are continuing to engage with grant agencies as well as private developers.

The image on the right here is what we envision the site looking like. We will be, the Port of San Francisco will be undertaking the below-ground improvements, so that's the wharf strengthening, the soil improvements, and utility upgrades. It would be on a developer or operation partner to really come in and build these fabrication facilities.

That's our vision to date. We're excited to continue these conversations and to be a part of AB 209 and figure out how we can get these things funded.

Thank you.

MR. HARLAND: Great. Thank you much, so much, Simon. And if those board meetings, if those are broadcasted online, if you remember, if you could send me a link, I'd love to listen in.

And so, okay, so now we'll move back down south and go to San Diego. David, I don't know if it's going to

be you or Thomas that have the most miles traveled today. Rob, you were probably going to be close, but then Crescent City showed up.

But David, name, organization, and then take the mic.

MR. YOW: Great. Thank you, Eli. David Yow, Port of San Diego, Legislative Policy Administrator. No slides today. That's my ploy to bring you all to San Diego and check it out in person. Thank you, especially to Eli and all the CEC staff, State Lands partnership, and of course, the leaders at both agencies that have been so very supportive in getting us to this point.

A quick introduction, if you haven't yet been to San Diego, there are a few of us out there, it's the southernmost of the ports here at the dais today. There's five member cities that are within the jurisdiction of the port. It's not only San Diego, because that's in the name, but there's National City and Chula Vista, Imperial Beach, Coronado, and that comprises 34 miles of waterfront.

There's a $9.2 billion economic impact that we deliver, and the way we do it, it's maybe a little different than some of the other ports. What you've seen at virtually all the ports may look similar, and yet underneath the surface, you have different aspects. Some of the aspects you'll find in San Diego go beyond

traditional maritime. There's recreational visitor-serving activities and many parks and natural spaces as well. But, of course, for our answering the call to duty for supporting the offshore wind industry, that's going to enlist our maritime terminals. We have two cargo terminals, and with them, the space and the workforce, and I'm going to hit on those two points probably the most today.

We'll start with the space that we have. The Tenth Avenue Marine Terminal has approximately 96 acres, and the kind of work that they do is handling cargo that doesn't fit in a box. It's high, wide, and heavy, and it's cargo that's large enough that it requires substantial laydown space. And so, in fact, to that end, we've obtained federal grant money to knock down some of our antiquated warehouse sheds that aren't as necessary as the acreage that we need right there where the ships dock.

A little bit south of there is the National City Marine Terminal, and that's 135 acres. They handle, also, non-containerized cargo. It's assorted ro-ro cargo of various types that, again, need space, whether it's military helicopters, or obviously automobiles, one out of every ten cars on the road comes through there, the Hawaii service that connects to the mainland, it's anything that, again, doesn't fit in a box, and that answers the mail on

offshore wind.

The second thing that I mentioned, along with space, is workforce. This is another uniqueness, I think, in San Diego, is the fact that on our working waterfront, the area that is between our two cargo terminals, along with the substantial Navy presence, are six shipyards, including General Dynamics NASSCO, which employs something on the magnitude of 3,500 employees. There's 700 steelworkers there. This industry could bring in another 2,000 of them, and they are the largest full-service shipbuilder on the West Coast today, doing tons, literally 60,000 tons of hot work every year in steel processing.

The other thing that I think goes with the workforce is the access to the heavy-lift crane system. Port of San Diego has successfully obtained the first all-electric mobile hardware crane system in North America, and it was made for us in Germany. It just arrived, and it will be Commissioned later this year. It will have a 400-metric-ton heavy-lift capacity, which is the heaviest on the West Coast, unless you go up to Vancouver or bring in your products from the Gulf, so that's quite a ways away.

Looking at the opportunity in front of us, and thinking of Eli's categories, Categories 1 and 2 are going to be, I think, the most interesting to us at the outset because of the initial tools that we need to eventually get

to the point where some of our other sister ports are today. One is that business plan. That's going to help us explore the options that we have without disrupting existing business and honoring the commitments we've made with our other economic partners there and look at how to allocate the space and the operations. That's one.

Two is an engineering design study to help us develop the area to maximize what we estimate to be 30 to 40 acres that could be utilized. And here's, I think, even bigger than offshore wind, if it's possible to say it like that, is all the multiple co-benefits that you see when the state makes that sort of investment to move ports in this direction.

Because it's not just going to be offshore wind that benefits. As huge an undertaking as that's going to be, you have existing maritime -- or I'm sorry -- maritime activities that can be enhanced through greater efficiency of goods movement, being able to, within our existing footprint, reconfigure operations so that we can actually do more with the same amount of space, and that's going from our supply chain prices to where we are today. I think we've seen the benefits of doing things like that.

We're are also a commercial strategic seaport, and that's a designation I didn't touch on earlier but maybe I should have started with that because that

underscores the special relationship that ports like San Diego and 17 other strategic seaports in our country have with not only the U.S. military, in our case the Navy and the Army, but also those shipyards that, again, provide the ship repair and maintenance for the Navy. And because of that role that they already have with their workforce, with their facilities, with their skills, all the trades already in the San Diego area, they're able to springboard off of that to supporting a new industry.

And I'll add a third, which is emissions reductions. You have a port that's already electrifying, it's decarbonizing its operations and doing so now with, you know, I'll go back to that crane and say that this is the sort of investment that allows us to maximize the right kind of infrastructure, the right kind of equipment that has improved benefits for our portside communities.

So there are many strategic advantages, as well as the one that's in front of us today, for the workforce, for the trades in California, and we look forward to strengthening the partnership with CEC.

Thank you.

MR. HARLAND: Great. Thanks, David, for walking us through that, appreciate it. And also thank you for being on the panel today.

We're going to go back to Zoom for the next two

presenters. We're going to first have the Port of Hueneme, and then after that on Zoom is going to be the Crescent City Harbor District, and then we'll finish in the room with Jason from Port of Oakland.

So I'm going to pass it over to -- do we have Port of Hueneme on? I think Miguel's on today.

MR. RODRIGUEZ: Yes, I'm on. Thank you. Miguel Rodriguez. I'm the Community Relations Director here at the Port of Hueneme. And I'm happy to be here participating. I think that this is a great opportunity.

Obviously, for us at the Port of Hueneme, we are in a very strategic location, very close to Morro Bay. Unfortunately, we are not necessarily the most spacious port in California. Our entire port is literally about 120 acres which, you know, is a testament to our efficiency, right, because we were able to move over $14 billion in cargo value, as well as we're the number four California container port, and we're in the top ten percent of U.S. ports. And that, you know, places a very heavy responsibility on us, primarily as a job creator in the region, right, for creating opportunities for folks, and also for business and trade to occur in our Central Coast area.

Because we are very limited with our land space, our customers and our business partners have had to create

opportunities through acquiring land off port. And this not only has cemented a lot of our partners off port, but also has taken a lot of the real estate. And we're also surrounded by a lot of agriculture, which further limits a lot of our capacity, right, for some of these larger operations. We do have about 40-feet berths, right, that are available. However, also the entrance to our channel is not very wide, right, it's about 300 feet, so that makes it a little bit difficult for a lot of these great operations.

However, based on the studies and the Strategic Plan, we would be very interested in participating in port infrastructure and workforce development. We do have a lot of capacity, right, to help some of these vessels that are going to be doing some of these supply missions or crew changes, or even doing some of these inspections out and about, and also creating something related to a training center that's near where the focus area is near Morro Bay. And this would also help us create more jobs and help some of the folks that are in our region right into the middle class through some of these new improvements in technology.

So ideally, we would see ourselves collaborating for funding, for development of whatever it is that we need to, you know, be a part of with other sister ports. I do believe that our bigger sister ports do have a lot of the

advantage for having more land available. But for us at Hueneme, I think that the more strategic play in this effort is to be a part of the operations and maintenance.

So with that, that's the end of my comment. Thank you.

MR. HARLAND: All right. Thank you for joining us today, Miguel, and hopefully you're able to hang on for a bit while the panel still goes.

So we're going to stay with Zoom participants. Next we have Mike from Crescent City Harbor District who's going to be presenting remotely, and then Thomas from Crescent City is here in person.

So, Mike, it's you and then we have one more presentation after and we've added all your slides to the deck. Hopefully all of those look the same as when you sent them to us. We did our best to integrate them. So I'll pass it over to you, name and organization before you start. Thank you.

MR. RADEMAKER: Okay, sure. I'm Mike Rademaker. I'm the Assistant Harbormaster for the Crescent City Harbor District. And as you mentioned, my co-presenter, Thomas Zickgraf, he's our Comptroller, he'll jump in as needed to provide any additional context.

So first off, thank you for this opportunity to introduce our small harbor to those who may not be familiar

with our capabilities and our exciting potential. Just to provide some perspective, we're right up against the Oregon border in the northernmost section of the north coast. So our Harbor District is approximately 6,000 acres. So we're modest in size, but I'd say we are very large in terms of our enthusiasm for wind power.

Okay, next slide.

So our local economy, it's gone through several phases. Initially, we were part of the California Gold Rush in the 1800s, then dominated by the timber and fishing industries. And more recently, tourism has been significant, especially after the establishment of Redwood National Park in 1968, which is adjacent to our harbor district. And we're very excited about offshore wind power revitalizing our local economy. And we appreciate its significance in the statewide, national, and global energy priorities.

Okay, next slide.

So our leadership team has a strong maritime background, naturally, especially our Harbormaster, Tim Petrick. And he's complemented by other members of our team with engineering experience. Myself, personally, I've been focusing on energy engineering more recently. And our Comptroller, Thomas Zickgraf, has decades of experience in finance and business development. So we know how to use

funds responsibly and prudently. And our Grant Manager, Mike Barr (phonetic), brings decades of experience managing clean energy projects. And we're all very enthusiastic about the future prospects of wind power.

Next slide.

And we're very proud about our success in obtaining grants that are laying the foundation for offshore wind development based out of our harbor.

Next slide.

So this includes the construction of a new seawall with some new and modern hoists.

Next slide.

We're also preparing to construct a new dock that will be capable of supporting a minimum of 500 pounds per square foot up to several thousand pounds per square foot, which is well-designed, obviously, for offshore wind O&M activities.

Next slide.

And these are just some further examples of recent grants that we've received just to kind of give you an indication of what we're up to.

Next slide. And next. And next one.

Okay, so looking forward to the future.

Next slide.

So we want to bring attention to the fact that

off the Del Norte County coast, we have some of the best wind resources of the entire Pacific coast, with average wind speeds up to 12 meters per second.

If you can see that white star there on the map near the California-Oregon border, that indicates the location of the Crescent City Harbor District. So we are really strategically located, approximately 30 miles north of the Humboldt call area and 30 miles south of the Brookings-Oregon call area. And BOEM has indicated that an even closer Del Norte County call area is imminent.

Okay. Next slide.

So this next slide illustrates the suitability of our Harbor District to serve as an operations and maintenance port. We have 25 feet of depth in the main channels, which could potentially be deepened to 30 feet in many areas. We're approximately 6,000 acres, and we have abundant potential wet storage areas.

Next slide.

So these are examples of some of the vessels that could comfortably work out of our harbor. So we're capable for turbine construction vessels, but we're very capable of hosting operations and maintenance vessels, which includes all the vessels shown here, up to several hundred feet in length.

Okay. Next slide.

So these next slides just provide some additional context by illustrating future projects in our harbor.

Next slide. And next.

So we are really embracing wind energy. As I mentioned, we're strategically located, and we've been engaging with Moffatt & Nichol and some other engineering firms to validate the suitability of our harbor for wind power operations and maintenance. And we have a number of infrastructure upgrades in progress, as illustrated by some of those grant funding opportunities that we've taken advantage of.

Additionally, I think it's worth mentioning that we have a diverse community. So we're home to independent commercial fishermen. We engage with our tribal partners on a regular basis. And we have some underrepresented groups that are perfectly aligned with the state's inclusivity goals.

Next slide.

So really, the focus of today's meeting, how the Energy Commission could help us and other smaller harbors. We really appreciate those Category 3 funding opportunities to provide matching funds. You know, given our size, a small harbor can definitely be a challenge to get the match requirements necessary for some of these huge infrastructure projects that will be required for offshore

wind.

We're also really keen on anything that can be done to streamline their regulatory approvals. And we could certainly appreciate some technical assistance with permitting, project management.

And we really want to promote collaboration among large and small California parks and harbors down the coast.

Next slide.

And another challenge, particularly in our area, there seems to be a lot of myths in the community about wind power and its impacts to the fisheries and coastal communities. We see it really as a net positive. But this has been challenging. There's been some opposition, especially in southern Oregon. And we're doing our best really to present an objective picture. Some of these offshore wind power platforms have provided, you know, areas for fish to flourish, and it's not necessarily negative.

We also really want to promote the economic development of underserved and economically distressed communities through offshore wind power. We think there's some real potential there.

Next slide.

That's the end of my presentation. So thank you

very much for the opportunity to present today. We're extremely excited about future prospects for offshore wind. And we appreciate the support provided by the California Energy Commission.

MR. HARLAND: Thanks a lot. Did you want to add anything to the presentation?

MR. ZICKGRAF: So one thing I would just stress is really the need for the match funding. It would probably be the most beneficial for smaller harbors and, I think, for all of us. It's really to be able to leverage match funding, and then also being able to look at how can we prioritize harbors and ports that have started the work.

You know, one of the things that comes to my mind is what type of demonstration projects could we roll out first so that we have the chance in some ways to learn from those that have started before us? You know, one of the things that I've learned by working with startups is that oftentimes what I've learned is from what went wrong as much as what has succeeded. So allowing some rollouts for demonstrations so that we can learn. So how quickly can we roll out projects and then adapt might be helpful. But the most significant would be match funding.

And then, also, ports and harbors, from someone that's sort of new to the industry, I've been with Crescent City for about a year and a half, and the one thing that

has really struck me is that ports and harbors have a really strong network amongst themselves for working together, for sharing resources.

And the one thing I would really encourage the Commission to do is to really find ways in setting up the grant programs to make sure that we're setting up the system so that we're complementing each other and not so much as competing against each other. Because as we're looking at building this very vast, complex new industry, it's going to take all of us.

And there's such opportunity out there that we really need to be sharing resources and working together as regions statewide and not necessarily competing against each other would be the sort of -- my two big asks are federal -- being able to use state grant funds for federal match, and then also setting up ways for increasing collaboration, for sharing resources and being able to strengthen the work and the networks that are already in place.

But thank you very much. And I'm really impressed with the processes that have been set up and being able to work with your team.

MR. HARLAND: Thank you for making the trip here to support the presentation.

Also, can you do your first and last name real

fast for the court reporter?

MR. ZICKGRAF: Sure. I'm Thomas Zickgraf.

MR. HARLAND: Perfect. Thank you so much.

Also, not just the windiest place up there, but the coldest ocean I've ever jumped in. So bring a wetsuit if you're ever going to swim up there.

All right, so we'll move on to the last presentation. And I just want to note, too, I should have done this at the beginning for our panelists, but our panel almost outnumbers the amount of people that we have in-person in the audience. I think that's because it's a Friday, so it's hard to bring people here. At one point, we had over 150 people on Zoom. So there's a lot of people listening and paying attention. So just wanted to make sure you knew that.

So pass it over to you, Jason, name and organization.

MR. GARBEN: Great. Thank you. I'm Jason Garben. I'm with the Port of Oakland. I manage our Project Management Division. Thanks Eli for having me. Appreciate the opportunity to be here to speak to kind of our interests from the Port of Oakland's perspective.

The Port of Oakland is primarily a container port serving the Northern California region. I have one slide, I think.

MR. HARLAND: Yeah, you have a map; right?

MR. GARBEN: I think I have a map.

MR. HARLAND: Yeah.

MR. GARBEN: I don't see it up there yet. But we have about 1,300 acres of maritime-related facilities that, you know, are either marine terminals, container terminals, or ancillary services that support those marine terminals.

I feel like we're a little late to the wind party, but we're kind of reengaging and finding that we may definitely have some interest in supporting and figuring out how we fit into this industry on the West Coast.

We've been, you know, in negotiating a deal for a major league ballpark on the Howard Terminal, which is highlighted on the map there toward the bottom and with the black outline. And I think that we've kind of determined that, you know, with our transition to zero emissions, you know, operations, what better way to support, you know, the need for additional power through this offshore wind industry.

So we are re-evaluating the Howard Terminal location. It's about a 50 acre site. It's got about 2,000 linear feet of berth frontage. And the depth of the water there is about 42 feet.

I think that, you know, from our perspective, you know, we're very early on in determining what we would

need, but some of the Category 1 and 2 funding that you explained earlier would be of interest. And you know, I think that we'd be very interested in preliminary engineering and workforce development for our local community.

So, you know, I'm here today to learn, and we're also very interested in monitoring this as we move forward. I just wanted to kind of keep my comments brief and again, appreciate the opportunity to be here.

MR. HARLAND: Great. Thank you so much for being here, as well, making the trip and participating.

So we're real close to being able to, I think, break the panel. But before I did, I wanted to see if Chair Hochschild or Commissioner Monahan, if you had any questions for the panelists or any clarifications before we let everyone go? I wanted to open it up to you.

COMMISSIONER MONAHAN: Well, I just want to say quickly that I really appreciate all the ports engaging on this. And what's really heartening is to see that, you know, no matter what level of engagement you've had so far that all the ports, I think, have an interest in engaging or learning more about the role they can play. You know, great to hear the port of Long Beach, of course, and Humboldt already kind of leading the way in terms of staging and integration, but there's lots to be done for

sure. So exciting to move forward and thanks to everyone for participating.

CHAIR HOCHSCHILD: I just wanted to chime in and give my thanks as well. That was a really, really terrific sort of tour through all of the opportunities. And I appreciate all the preparation and look forward to the continued engagement with everyone as we move forward. Thanks everyone.

MR. HARLAND: Great. Thanks a lot.

And I just want to say thank you, as well, to the panel. I don't know if you had any questions or any comments?

MS. ANDERSON: No.

MR. HARLAND: No?

MS. ANDERSON: Just want to echo my gratitude as well. Thank you.

MR. HARLAND: Yeah. Yeah, we appreciate it. I'll be looking forward to any written comments, or also there's a public comment opportunity at the end of this that you're welcome to participate in, especially reactions to my presentation earlier.

We're going to break for five minutes. So if you can be back at 3:18, we have our last panel today, and then following that will be public comments. So we'll see everybody in five minutes. Thank you.

(Off the record at 3:13 p.m.)
(On the record at 3:22 p.m.)

MR. HARLAND: All right, we're going to get started on our second panel.

Hilarie, do we have you there?

MS. ANDERSON: Yep, I'm here.

MR. HARLAND: Fantastic. Perfect, so let everybody get regrouped. Okay. Welcome back everyone. Appreciate everybody hanging in there for our second panel.

So the first panel we just ran through, the purpose of that panel, hopefully everybody could tell, was to bring in ports and harbors into a conversation. And we kind of thought of that as the -- almost kind of the public sector panel behind this. And so I think we heard a lot about engineering and sort of design concepts.

We also wanted to bring in a private sector perspective into this panel. We obviously are investors ourselves in some way with our grant program. So we wanted to make sure that we understood through this process the full sort of investment cycle that will have to happen to improve offshore wind -- or approve ports for offshore wind.

So this panel, we're going to have a presentation first by Brian. And then we're going to move in and hear

remarks from Sean and Sloane and Molly. We do have Sean online. So, when we get there, Sean, you'll be ready to make your remarks. And following this panel, we'll do public comment. And after that, we'll go to wrap up and go home.

So, Brian, I will pass it over to you. Again, name, organization. And Hilarie, who's awesome running this Zoom, as well as moving these slides along, just let her know when you need to go next.

MR. SABINA: That sounds great. Thanks so much, Eli, for the warm introduction. My name is Brian Sabina. I'm the CEO of Clean Energy Terminals. We are a California-based project developer that's focused on building out port infrastructure. We have been engaging over the last seven or eight months with a number of the ports that are here in the state and hope to be bringing our first project, announcing our first project and moving it to market in the next, we'll call it four to six months or so.

Thank you to, of course, Chair Hochschild, Executive Lucchesi, Commissioner Monahan, Eli, your whole team at the CEC. We think you guys are doing a great job pushing this forward. And California has really taken a great leadership role in thinking through ports and infrastructure needed for offshore wind in a comprehensive

and thoughtful way. I would actually argue that what's been done here in California is probably nation leading, given what we've seen across the country and how you've taken a really purposeful approach to this.

Prior to launching Clean Energy Terminals, I had the pleasure of sitting in a seat very similar to what Rob or Suzanne sat in. I was the Chief Economic Growth Officer for the State of New Jersey at the New Jersey Economic Development Authority. I led a large portfolio of financing programs, including offshore wind-specific programs, a little bit similar to some of the grant programs that we're talking about today. I led strategic sector support for the state, which we engage a lot with offshore wind companies.

And I also led a real estate and infrastructure development team and, through that role, led a number of port projects for the state, but specifically helped negotiate the deal for EEW, a monopole manufacturer, to come into the port of Paulsboro. Very excited to see the port of Paulsboro get a PIDP grant today to support their project again.

But probably most relevant to this conversation is we led the development of the New Jersey wind port, a billion-plus dollar co-located marshland plus manufacturing port, and took that from, you know, cocktail napkin through

now construction, and we looked to open up for phase one operations next year, mid-year. A project that's very similar to what Rob and the team at Humboldt are doing, but for a fixed bottom project as opposed to floating.

One of the great things that we had the opportunity to do over the course of the last five years of working on offshore wind on the East Coast and now coming here to California was work with what was then known as the Business Network for Offshore Wind, now known as the Oceantic Network, as part of a ports working group. It's a group of 20-plus private sector companies, ports, engineering companies who are all committed to really thinking through how do we accelerate port development for offshore wind and all the economic benefits that happen from that here in the United States.

One of the things we've done, really inspired about what's happened here in California, was to say California has really thought deeply about what is the true cost of port infrastructure development going to be? What does the true scale of development need to be in a very thoughtful way? And we said that same approach needs to be taken across the whole country.

So we put together a number of resources to launch this report you see on the screen, building a national network of offshore wind ports. It's a $36

billion plan for domestic clean energy infrastructure that's talking about all the different types of offshore wind ports across the East Coast, West Coast, and the Gulf Coast.

Our focus was a little bit different. It's a little bit less technical, a little bit more about how do we chart a financial pathway in an engagement pathway to get there?

So we really wanted to think about, one, let's scope the problem appropriately in that in the report for not just the West Coast but the whole country. Let's make sure we understand what's happened on the East Coast so far and let's make sure we're learning from that as we move forward.

And then we've talked about how do we bring together some real thinking about when money is needed and what are some solutions that can be brought to the table so that both public sector money comes into this as well as really private sector money.

When we talk about the scale of funding that's required to get into offshore wind infrastructure, we really believe that it's important for both the public sector to be investing, but also to find ways to enable the private sector to invest as well. Whether you're talking about #$11 billion to 1$2 billion or $36 billion, either

way, that's more money than probably most of us have in our pockets, and sharing that burden is probably pretty important. And we think that that should be a cornerstone of how California continues its nuanced and thoughtful approach towards infrastructure development moving forward.

Just a tiny, one more second on just context of the report that we wrote, part of the working group. When you talk about what are we building towards, what are the goals, obviously every state has different goals. We anchored this report and what we need to get to 30 gigs by 2030. But really if you're in the port development business you probably know that if you don't have a project that is in hardcore development today, you're probably not on track to support the 30 gigawatts by 2030.

And what we should really start thinking about given the length of the asset classes, you know, the lifespan of the asset classes that we're building is we should be thinking about our long-term national goals, 110 gigs by 2050 at a national level, and that really meshes well with what we see with how California is thinking about 20 gigs by 2045.

You can go to the next slide.

This is a bit of an eye chart for those of us who are sitting in the table but hopefully those who are at home can read this a little bit better. But we did a

bottom-up analysis of how many ports are actually needed across all the different port types. We roughly share a similar methodology to what's been done in the AB 525 report. We said how many ports do we actually need across manufacturing, across O&M, across staging integration, marshalling, how many are in commercial operations today, how many are in construction today/in development, and what can we learn from that?

Our big takeaway is when we do this bottom-up analysis is that the country needs somewhere in the range of, you know, 99 to 119 different port sites. And the way that Matt framed it earlier of kind of thinking about a site where there can be multiple sites within the context of a given port is really important. And when we look at how many of those sites are in development today, we see around 35, maybe we could add a few more of those, but somewhere in the range of, you know, 35 to 40 sites are in development today.

So there's a huge offshore wind infrastructure gap across the country. California and the West Coast are part of that but we also need to put that in the context of the Gulf Coast and what's also needed on the East Coast, especially for manufacturing over the long term.

And we put this picture up there to say that what California is thinking through right now is part of a

national story of funding that's needed. It's not just California's burden to bear and that we should be thinking about state programs but also, as Suzanne said, collectively lobbying for the right sort of federal solutions as part of how we move forward.

We also looked a lot and engaged a lot with the ports that were in development today. And I should mention that a couple of the members who are on this panel today were peer reviewers of this report, including Sloane and Sean, a number of the companies that Molly represents.

And when we talked with a lot of companies what we found is those products that are in development on the East Coast right now are actually facing pretty significant financial stresses. And that's not just due to the fact that it's a major wind and nascent industry. There hasn't been enough committed state funding and committed federal funding to come in to really support these projects at the pace that we need to develop to achieve our goals. Most projects face somewhere between, I'm trying to read my numbers here, between $50 million to $150 million dollar funding gap in their project. And what that's essentially doing is slowing down development.

If you look at New York, if you look at some of the opportunities elsewhere up and down the coast, there's a lot of projects that are, you know, designed, they're

almost there, but they're not moving forward right now at the pace that we would expect them to. And that's something I think California should really think through is how you're giving enough jet fuel into the process throughout the whole development cycle so that you're not having projects stall and then put your bigger picture goals at risk or our bigger picture goals at risk. So there's a big opportunity/challenge here.

I would also posit from the private sector perspective, there's never been more private sector money looking for great infrastructure projects to invest in than there is today. So we need to find ways to try to pull in that private sector funding to solve the red parts of these bars.

We can kind of go on to the next slide.

So we first built up this bottom-up analysis of how many projects are out there and needed across the country. We then said, what's the gap? We used a bit of a top-down methodology. I don't kind of go into all the numbers here, but they're largely aligned to what was in the AB 525 Report.

And we said, well, to understand the funding gap that we have as a country, we first need to understand what is the gap in current projects. We estimate that to be around $4.1 billion, which if you do the math, $4.1 billion

divided by the number of products that are outstanding is roughly in that range of $115 or so million per project. And so that's kind of gap one. That's a burning platform that all of us need to be working on.

And I would encourage the state of California to think about the product, you know, in Humboldt or the project in Long Beach as in this category of if we don't invest here early, we're not going to de-risk the market and we're really going to risk our goal. So we would say, one, really think deeply about this opportunity. It will create certainty for the whole market for all of us as private investors to further invest.

The second chunk, kind of step two on the slide, is there's a whole bunch of other projects. And there's a range of how many we need, but if you kind of look at the top end, there's a bunch of projects that we still need to identify and we still need to push forward. And to do that work starts with little dollars in kind of smaller amounts that are high-risk dollars that you're going to spread across a portfolio of different sites and then you're going to mature those concepts and really try to drive them forward. We also need to be equally addressing that today so that we're not in the same position where we have projects that are kind of failing in the future.

When we add those numbers up, we get to a pretty

big number on the bottom right of the slide, it's $27 billion. It's probably, you know, in the range of what would make sense given what California has talked about. It's a bit shocking to some other regions. But you start saying $27 billion, that, as Matt said, that's in today's dollars, that's not escalated, that seems like a lot of money.

But if you go to the next slide, we think it's really important to put this into context, that $27.2 billion we're talking about, that red sliver unlocks another $440 to $660 billion of investment into clean energy generation, into clean energy jobs. And when you think about it this way, these four percent to six percent, you know, somebody mentioned down payment, we could actually use that concept for this, you know, whether it's $11 billion to $12 billion or it is the $27 billion we're talking about at the national level, that's the down payment that allows us to unlock the blue part. It's what allows us to have ports be this transformative asset that not only deploys offshore wind but turns all that offshore wind spending into jobs for people in those communities and opportunities for local businesses.

So if you think about it on a ratio basis, it's 16 to 29X, right, the return by investing in port infrastructure in terms of what you're going to get in

overall generation investment. This is a common sense thing to do. We just need to figure out how do we rally the right set of resources to figure out that red source of the pie. So if we do that, we're going to get the blue chunk of the pie.

If you move on to the next slide?

This, again, it may be hard for those who are sitting in the room, but the next step we took, which we think is probably a bit novel compared to some of the other studies, and there have been lots of studies, is we looked at when our projects needed over the course of the next 10 to 15 years. And we plotted out those projects using average pre-development timelines, average development construction development timelines, and we said, okay, well, when do they need capital? We got that blue bar, the kind of inside curve there. That's the $27.2 billion spread out over time.

What happens when you spread that out over time is then you have to account for the fact that, well, now there's construction inflation. Construction inflation is bad as we all feel in our pocketbooks, having inflation of, you know, four percent, you know, eight, percent now, construction inflation over the last three years has been in the double digits. Over the last three years, I think it totals 30 or so percent. So factoring that in is a

really important part of the policy planning process, and we really need to be thinking about this as a set of long-term investments.

On top of that, right, when you add in that, you're adding in additional 20 percent to 30 percent in terms of actual year of expenditure dollars of what we need to think about in terms of our policy. Then we need to think about if it's just if you do the blue plus the purple bar, that gets you to $36 billion. That's if everything is basically grant funded, and that's probably not realistic. We probably need to use a range of tools, of private sector money, of concessional financing, of private bonding capacity.

Well, then we need to start to add in financial costs into that, because there's a reality of what comes with using those mechanisms. We anchor in the $36 billion as the number, but really when you factor in financial costs, it's probably $42 billion across the country. Cool.

This is pretty big numbers, but it's important for us to think about it in this sort of nuance as you're designing programs. And a grant program is one sliver of this, and it's a really important sliver, but we wanted to set that in the context of how the private sector is thinking about the bigger opportunity here for offshore wind port investment.

Perhaps the most important line on this whole chart, and Suzanne and Rob and others, I see them nodding in the audience here, is the reality that I can't wait until whatever back years, back half of this decade, to get those dollars. I need those dollars three years in advance of what I need to spend them, because I have to go raise outside financing, I have to secure efficient contracts, I need to kind of lock in commitments. These are projects that take seven, eight, nine-plus years to develop.

We need commitments to funding, even if we don't need to spend those dollars, we need the ability to commit those dollars well in advance of when we need to use them. And this red line is meant to represent that of what is the curve of when we actually need the funding, whether it's private funding or public funding.

So I leave this to you all just to help further the conversation of how we should be thinking about investing in port infrastructure, and happy to follow up on this.

The last slide, if you don't mind pushing forward, I guess it's a penultimate slide, as part of the report, we put out nine recommendations for both the federal government and states to think about, how do we start to address this really big challenge? $36 billion, you know, $42 billion, these are big numbers.

We roughly break them into two categories of solutions that are complementary and to some degree substitutes. We can either subsize more of these projects, or you can find ways to spend money and de-risk the projects to pull in more private capital. So subsidize, that category is more about how do we spend private -- oh sorry, public dollars. There's a range of different things that we could do.

This grant program squarely fits into kind of that second bucket, and we applaud all of the sponsors of AB 209 for getting ahead. You're one of the first, I will say, three states to really have a really good grant program to start this process. You should feel proud about that. Other states are going to look to you to figure out how to do this. So like there's a great opportunity to get it right and be a national model here.

But those are not the only options. And as you move forward, you should be thinking about the fact that there are other opportunities to be both subsidizing as well as de-risking projects using public dollars to pull in, or what we call crowd in, more private dollars.

If I just go to the next slide, if I take all of the learning over the last, you know, four or five months as we put this together, and I try to silt it down into what does this mean for your grant program, a couple of

things.

One, some other states have looked at should we just shove most of the development costs for offshore wind infrastructure into the cost of electricity, into those offshore wind projects, basically put it on the back of the lease holders? I think we found pretty definitively that at best that's inefficient and kind of risky, especially as we've seen in the last week when certain projects, you know, go sideways or canceled. If your infrastructure is then also getting canceled with that, that's not a great infrastructure development strategy.

Similarly, like it's also a potentially regressive approach; right? Like infrastructure should be built using tax dollars, not necessarily on the backs of repairs; right? And we need to find the right balance. And using grant programs like this and other tools is probably the right way to fund infrastructure development, even if it is for electricity generation.

I think the second really big thing that we learned is we're going to need to get that number, and I'm sorry for going a little bit long here, but we're going to need both public and private investment into these port sites. In most of the ports that we've talked about today, there's publicly regulated and publicly owned facilities, but there's also private facilities. And we, as a set of

private investors, are very interested in putting capital to work in this state and in these communities, but we need the ability to help de-risk our projects and de-risk our investments to get that right.

So we'd encourage you, as part of your grant program, to allow private entities and private project sponsors to also be eligible entities. And, Eli, when you put up that page, I saw plenty of language that was in the statute, you know, specifically other entities that demonstrated commitment to California offshore wind investments and are partnering with the facility.

There was another one that was other waterfront facilities that referenced terminal operators. All of that, we think, gives you wide berth, no pun intended, to allow private sector entities to participate in this program. And we think that allowing that will encourage more private investment into these projects. And often that's done in partnership with public entities, as well, but often it's important for, as a private entity, us to be able to apply for those dollars specifically on our behalf, given the fact that we hold a slightly different set of risks and kind of a different return profile and expectations as we're going through this process.

I think the next one is, you know -- oh, sorry, if we pull back one slide, I'll try to run through the rest

quickly.

I already mentioned this point, but for all of us that are considering a set of projects, I think it's pretty clear that there's a lot of risk in the market, in that having S&I ports that are settled and we kind of know a timeline for it, that helps de-risk the market for everybody. It helps de-risk the market for manufacturing ports. It helps de-risk the market for O&M ports. We would encourage you to do that.

However, you also need to be thinking, and I would posit, that those projects are more mature and should probably get a bigger chunk of the grant funding because they have strong financial needs right now. But you need to balance that with also thinking about how are you investing in kind of that next phase of sets of projects with probably a smaller sets of grant money in that Category 1 bucket, spread across a number of projects so that you're raising a portfolio of additional sites that could be eligible.

And I think a lot of the folks that you heard on the panel previously were saying that they need that early stage capital and not, you know, tens of millions of dollars, we need a much more manageable amount. And I would think as you design your grant program that you would modulate the requirements based upon the amount of funding

so that we don't have to have the same restrictions on a million dollars that you would have on $20 million. That might be a design feature we would think through.

The next thing I think we would say is the scale and the funding is really big. We have a small amount of down payment today but there's a lot of power in building tools that can be scaled over time and that, if you're going through this process, we should think today about building tools that more funding could flow into over time so that we don't have to go through this process again if more funding becomes available. We know there's a deficit situation today but that may not be the case in three years when some certain projects are ready to apply for this funding.

And then, you know, of course we need to pair this grant funding with a variety of the other sorts of solutions that were on that page previously.

Just two other things that have popped to mind in our conversation and then I'll yield is, one, I would encourage you to have your grant funding solicitation be an open call and not time-based, because I think there's a wide variety of readinesses [sic] in terms of the -- of where different projects are. And if you miss a window and then you have to wait another year to come back that can really slow down development, whereas if you leave a window

open then as soon as a project is ready they're going to want to apply. It's first come first serve, right, to some degree there. But it allows you, if you have some chunks of funding set aside for each one of the different pools, it maybe allows you to have a more efficient overall development process.

And then the last piece I would note is that there was a -- the next study, AB 3, and how do we start to think about the learnings from this for what we're doing here into that. What should be done is really look at manufacturing ports. We look at that aggressively. And I can tell you, and I'm not going to get in trouble, but manufacturing ports don't pencil; right? Like S&I ports are in the back of a large infrastructure offshore wind energy project. They can probably pay higher rents to those ports that maybe can get closer to paying back the cost of that development. O&M projects maybe can as well.

Manufacturing projects with the OEMs are much less willing to pay higher rent values back to the ports. And because of that it's harder to make the business case if I have to drop $350 million referencing the numbers that are in the AB 525 report. If somebody's paying me a million dollars rent per year to support a 60-acre site, I'm never going to make that business case for a public entity or a private entity. We need to solve that problem

if California wants to have more manufacturing in the state. Solving manufacturing port infrastructure is going to be critical to that.

So with that I'll pause. And I know we have a lot of really smart folks who have other perspectives other than mine, so --

MR. HARLAND: Great. Thank you so much Brian for the presentation. And if we have time for questions after the presentations, there might be some that leadership has, a few came to my mind, so we'll see if we get there.

But, Sean, we're going to turn it over to you, so name, full name and organization before you get started, and pass it over to you. Thanks.

MR. BOYD: Thank you, Eli. Thank you to the panel and the workshop attendees. I don't have any slides. I'll keep this relatively brief.

My name is Sean Boyd. I work with Ernst & Young in the Infrastructure Advisory Group. We are management consultants, financial advisors, largely working for state across the U.S. We work on most of the big multi-billion dollar programs that are underway. For the last several years we've been advising the State of New Jersey on their wind port. We are now retained by the Port of Long Beach to support their preparation of a business plan for their Pier Wind project. We've been in dialogue with multiple

ports up and down the West Coast and the Gulf of Mexico.

The wider firm I work for supports offshore wind developers, tax equity financiers, and all parts of the supply chain. So we bring a whole variety of independent perspectives to this issue and I personally am now immersed in the offshore wind port market. I'm based in Los Angeles.

I would just offer a few brief perspectives. Much of it is echoing what's already been said, but in case it's helpful for the CEC and the other members of the panel here to hear it, I think our perspective on the AB 209 funds, number one, is they have a tremendous possibility to send a signal which is urgently needed. The challenges facing offshore wind on the East Coast and the long lead time ahead of us on the West Coast to actually develop these ports and then develop the offshore wind market I think does mean that strong decisive action and a clear signal from the state that it recognizes critically the staging and integration ports that will then unlock the wider system of offshore wind ports is critical.

So I would, I think, from our point of view we would just underline the point that's already been made that getting this grant program out there and allowing applications to come in as soon as possible. It has a very powerful symbolic value which goes beyond the sort of hard

dollars that it offers itself.

I think the only other comments I'd offer for today is some points have been touched on about the AB 209 being a down payment and there's multiple billions of investments ahead of us. Perhaps we can just offer a few perspectives on that area.

There's some inconvenient truths out there that perhaps we can offer our point of view on. One, there may be a perception that ports themselves can afford these investments. We can report with confidence, they cannot. Certainly not the small harbors or the smaller ports but even the very large ports in the mix here are in the middle of huge capital programs. They have debt capacity limits that are potentially strained.

A lot of ports are moving towards zero emission and green port goals and there is
not -- it will not take the state or the state Treasurer's Office long to validate that there is not spare financial capacity sat within the ports to make the investments of the size that we're talking about for offshore wind.

Two, even if those ports could afford to make large multi-billion dollar investments into offshore wind ports, that investment must be returned. It must be earned back and returned at a premium. Brian touched on this. It's going to be earned back from rents charged to offshore

wind users. Those rents will end up being capitalized by the offshore wind users into their bids for power purchase agreements to the state, to the Department of Water Resources, and those rents will be capitalized at a cost of capital that reflects the full floating offshore wind risk. In other words, a high cost of capital.

So it's a very inefficient way to finance port infrastructure, to have too much of the cost of the port financed by rents. And there's a whole discussion to be had in that area.

There is something else that's very important that I think it would be good to have on our radar, which is the ability of a port or a port investor, whether it's a private equity investor, a port operator or a publicly owned port, but the ability of that investor to project and forecast future rents from offshore wind uses can be difficult in a nascent market. The need and appetite for offshore wind capacity at ports is dependent on future power purchase auctions by the state and by future sea space auctions by the federal government and, of course, other areas such as transmission and permitting.

There's a number of very significant variables which mean that the projection of rents over the long term, over a multi-decade span for an offshore wind port will not be straightforward.

And so it all adds up to, I think, a need for a sort of very robust and thoughtful dialogue between the state and the ports about what's the best way to tackle these issues and hit them head on. And we stand ready to support that.

Thank you. That's it.

MR. HARLAND: Thank you, Sean. We appreciate your participation today and those remarks.

So we'll move back into the room.

Sloane, you have a slide deck and a presentation, and after that, we'll go to Molly, so go for it, Sloane. Oh, yeah, first name, last name, organization.

MS. PERRAS: Sure. And I'll start with just a couple of opening comments to frame it. My name is Sloane Perras. I'm a Vice President of Supply for Foss Offshore Wind. I'm sure everybody in the port world knows Foss. We're a 135-year-old maritime company. Our parent company is the largest Jones Act company in the country. And we have one in three tugs on the West Coast and we operate in all of your ports.

Foss also has a spin off, which is Foss Offshore Wind, which is the entity that I am in. And we are devoted 100 percent to the offshore wind renewable energy market.

Just to kind of refresh, because I know it's Friday afternoon, we're all getting tired, but to frame

what's happening in California, what's going to happen on the West Coast, also the Gulf and eventually the East Coast, to meet the Biden administration's goal of 110 gigawatts of offshore wind by 2050, floating wind is required to meet 50 percent of that goal. So when you think about the scope of what floating wind is going to be, think about that.

And I want to put it in perspective. Foss is providing the barge solution for fixed bottom wind for vineyard wind off of Martha's Vineyard. It's a 13 megawatt turbine. To meet the 110 gigawatt goal, you would need 3,515 megawatt floating turbines, or the equivalent of 57 vineyard-wind wind farms. That is a lot. And we are going to go bigger.

We do hope that California can meet the 20 to 25 megawatt goals and reduce the footprint and reduce the impact. But we are talking about a lot of footprint, a lot of impact, even with the bigger turbines.

And I'm going to quote some statistics. Each of us quotes statistics from different sources, so they don't always line up, and it's just what's included and what's excluded. I'm going to grab one from NREL and the Department of Energy. The U.S. supply chain requires $11 billion in investment to meet just the 2030 goal and about $22.4 billion or $34 billion in investment overall for

ports, vessels, and manufacturing facilities. More specifically, this includes 34 manufacturing facilities.

I pulled them out because, like Brian, I understand that there can be more challenges with manufacturing facilities. These are a number that are not already in operation or under construction, all of which are going to need to be near water with naturally deep waterways and very, very strong bulkheads, which are very, very expensive.

I bring this up because I think something that the East Coast is finally figuring out is something that the West Coast is already really good at. And I will say, it took years for New England to decide to work together. And Massachusetts and Rhode Island and Connecticut only very recently came out with their cooperation agreement. They are cooperating on PPAs. I don't think the West Coast is there. I think California is clearly pretty far ahead and will continue to be far ahead in being open to lease areas.

But one thing that I think the West Coast can take a page from the East Coast, or from at least New England starting to cooperate, is the opportunity for California, Oregon, and Washington to cooperate on the supply chain. Very similar to what Rob said when he was providing the presentation at Humboldt, there is a lot of

offshore wind to go around. And $34 billion or $21 billion or whatever number, you know, I think I added it up, the $6.5 billion that just the ports covered in the room today, that's a lot of money for one state to come up with, going to the federal government by itself for matching funds.

An idea that I would encourage the CEC, the State Lands Commission, the Governor's Office, is think about how to work with your partner states and put secondary supply chain in other states, in Oregon, in Washington state that has additional harbors. I think that they're not ready or as far along in offshore wind, but I think they do have, like Long Beach, like some of your other ports, like San Diego, they have shipyards, they have a trained workforce, and they can probably support your supply chain and help California meet its clean energy goals faster.

So just something to kind of keep in mind that there is so much offshore wind to go around. It's only going to help facilitate California meeting its goals to think about using its other West Coast states in its process.

On the private investment front, we are -- Foss Offshore Wind is uniquely situated as one of the only owners of a private offshore wind terminal in the country right now. And my slides are going to kind of take you through what a different perspective of an offshore wind

terminal.

And let me preface this by saying staging and integration ports have to come first. They are the priority. What Humboldt is doing, what Long Beach is doing, they absolutely need the funding. These terminals can wait until projects are closer to the timeline. But if you forget about having these sorts of terminals that I'm going to talk about in a minute, you will not have successful projects any more than if you forgot staging and integration ports.

So our facility, which a proof of concept is in New Bedford, Massachusetts, this is what the site originally looked like. It was an old power plant. It actually started as a whaling port. It's the site for Moby Dick, if any of you like the classics, and it went from whale oil to coal to natural gas, and now it's going to offshore wind. But because we were continuing to use the site for energy, the city gave us the demolition permit to take down the largest building in New Bedford, which was the coal power plant.

Next slide.

We are going to take a shutdown decommissioned power plant and turn it into a multi, I call it a supply port, most people would call it an O&M site. And so when you drive up to the site, you have insulated parking from

the community, so 350 car spots, which means people aren't parking in your neighborhoods. They aren't parking in your stores and your bank parking lots. They're able to have secure parking in the facility and they come up to a terminal center where the technicians who are coming on and off shifts every two weeks can go to work.

This particular facility, which is shown right at the front of the driveway, can throughput 100 technicians a day. That's one to two SOVs coming in to take technicians out to the wind farm. And then we have, in this particular picture, smaller warehousing, about 10,000 square feet for Tier 2 suppliers.

So the anchor tenants for O&M facilities, at least for Foss Offshore's particular strategy, are developers. And so we have relationships with multiple developers who will be on our site. And each of them are looking at long term 15-, 20-, 30-year contracts where they do provide very competitive rent as low as they can drive it down because of the other cost factors in their market.

But we also have Tier 2s come in. And those are companies that are for floating wind, doing small fabrication, small manufacturing, chains, anchors, things like that. And they also are going to be operating for the life of the wind farm. And so you're looking at additional 10-, 15-, 20-year contracts where you have multiple tenants

on a site.

And I should mention New Bedford's about 26 acres. So this is not a huge site. It can actually be a fairly reasonable size that fits into a lot of your different port footprints.

Next slide, please.

This just gives different details if you wanted to know what is required to make a terminal center operational.

You can go ahead and go to the next slide. I won't go through the details of that.

And this is some details around the smaller warehouses. And then here are small vessel port -- small vessel slips. Those are about 150 feet long. They're designed for CTVs, crew transport vessels. I don't know if crew transport vessels work on the West Coast with the difference in the Pacific versus the Atlantic. The Pacific wave height is just a little bit higher, a little bit rougher. The water is a little bit deeper. So whereas CTVs are a normal part of the process on East Coast wind farms, I think it remains to be seen whether they would be necessary for West Coast wind farms.

But what these do fit are your ocean going tugs, so a 100 to 100-ton bollard pull tug about. Ours are about 128 feet long. These are 150-foot berths. And we all know

that tugs are going to be part of this story for offshore wind, so you'll still need berths of this size regardless.

Next slide. You can skip past that. That's just some detail for anyone who wants it.

This is an overhead look at the site. You get a little bit better idea of the multi-tenant aspect of the site. So the large buildings near the center of the picture, each of those is a two-acre lot. It houses about a 30,000 square foot warehouse and 5,000 square feet of office. That constitutes an O&M facility for a developer.

It would have probably 50 workers per two acre site. So new job creation. This is not going to drive as many new jobs as a manufacturing site. But what it is going to drive is people to live in the neighborhoods, live and work near where they're at, eating at the local restaurants for lunch every day, using the local banks, the local shops, the local retail. And so what O&M sites can do is they can provide a secondary economic lift, even if they can't provide the sheer number of manufacturing new jobs that a manufacturing facility could provide.

You'll see we have three deep water berths. Typically what we find -- there's actually a fourth, the CTVs you see on the right hand side will be a fourth deep water berth -- is developers tend to want an exclusive deep water berth for their SOV. And so if you have two deep

water berths, you probably will only sign with two developers. If you have four deep water berths, you can probably sign with four developers.

These have to be around 350 feet long. And the depth for an SOV is right around 30 to 33 feet deep. So a lot of your channels are already deep enough for SOVs, even in some of your smaller ports. The regular dredging that's going on with the Army Corps of Engineers is going to be sufficient, which makes your ports better within probably a three-hour ride of your lease areas, good potential O&M sites. And we are looking at some of them for O&M facilities on the West Coast.

Then you have cranes for loading additional warehouses. Those circular spools are cable reels. This particular site will probably end up with all warehousing. But something that I haven't heard anybody talking about on the West Coast is where are you going to store the cable, and not just the cable for the internal arrays and export cable, but also the cable and chain for the mooring systems? What happens when a mooring system breaks?

Well, there will be redundancies built into the design, I'm sure, but you're going to want to be able to change those out, which means you're going to have to have stock somewhere. And your ports that have vertical air restrictions are great places for cable, anchors, chains,

things that can be barged or towed out without worrying about the height of the bridge.

And so just something to think about. There's a variety of uses of ports. And the more that you think out of the box or the more that you figure out where you're staging an installation, and I'm looking at Suzanne and Rob as I say that, where you figure out where those ports go, you can start to figure out the uses of your other ports.

And there are a lot of other uses and then there are combination uses. On this facility, we're looking at a small manufacturing facility for a motion compensation system that goes on the barge. We're talking to a concrete supplier who makes the caps that go on the foundations to keep water out until the turbines are installed. And so there are lots of small 10,000, 15,000 square foot manufacturing facilities, businesses that tend to be more of small businesses and qualified businesses because they're not in such a large role in the supply chain.

And so the other thing that we do when we look at an O&M facility is we do a lot of community work, we do a lot of workforce development, and we look at the supply chain, not at the top level, not at the Tier 1 where the developer contracts, but we look at the Tier 2, Tier 3s, Tier 4s.

And as you push down through the supply chain,

that's often where you can bring in qualified businesses and small businesses. That's their comfort level. That's where they can grow and stretch their revenue and they can become part of the offshore wind story and grow their own businesses. They can't take on the billion-dollar job risk. But if you bring them in through the fabrication and manufacturing process and you give them homes and these O&M ports, then you can bring them in. And that's something that we've tried really hard to do in New Bedford working with our developers and our tier ones.

Next slide.

That is a very busy drawing of what that looks like for a diagram.

Next slide.

And just to finish up, we are a private investor. We did buy the facility. We have been awarded one $15 million grant from the State of Massachusetts. Our (indiscernible) Victorian, and so even without the need to bring them up to the strength of floating wind standards, it's still a very expensive process.

I think Brian and Sean both made really good points about rent doesn't pay the bills back when you borrow the money. Whether you borrow it through debt financing or you borrow it through an equity investment, you do have to find other ways to create the return to

entice the investors.

What O&M facilities do is they provide husbandry services to all the vessels that come into the port. They provide port agency services, and so those high-volume, low-margin transactions are what build the return for private investment.

I think that AB 209, the Grant Program, is a wonderful grant program. I hope it's the first of many because as I was counting up the dollars that just the public ports need. I don't know how you fit private ports into this first allocation, but I think a really important message for the CEC and the State Lands Commission to take back is to do additional grant programs and to leave the option open for private ports and private investors, like the people you're hearing from say, not because we need to be in this first round, because maybe we don't yet, maybe we can wait a little bit longer because our horizons are not coming as quickly.

But we do need help and we do need state matching funds when we're investing in these facilities because we don't just invest in the port. Just like the developer, just like the Port Authority, we have to invest in the community. We have to create a footprint, a presence. We have to ensure the well-being of the communities around us. And so we are investing just as much effort and time and

bandwidth into our facilities as a port authority does or a city does into their surrounding community.

And so I would just encourage all of y'all to keep that in mind when you're looking at kind of those other California waterfront facilities or those of us who are investing and working with those facilities that this has a lot of worthwhile effort, and we provide a lot of public good as well.

And I will wrap it up there.

MR. HARLAND: Great. Thank you, Sloane. A lot of the folks might know who Foss is, but this was my introduction to Foss, actually, so thank you for being here.

And I want to turn it over to Molly. Molly, it's great to have an offshore wind industry perspective on everything we've talked about today because we've had ports and some of the investors and experts in it, but really hearing, I think, like an industry perspective is going to help us round out some of our thoughts, so I'll turn over to you, name, organization, and then go for it.

MS. CROLL: Thank you, Eli. I'm Molly Croll, the Pacific Director of Offshore Wind for American Clean Power Association, or ACP. We're the largest clean energy trade association in the U.S., advocating for state and national policy. And in California, we have all five of the first

offshore wind leaseholders as our members, and I work closely with that group. So my perspective is not finance but bringing a policy background and speaking on behalf of the leaseholders and what we would like to see from this AB 209 funding.

Eli gave a great overview of the AB 209 statute. And I think what we see in that is that it provides some clear, you know, direction to the CEC, but also provides for a lot of discretion to the Energy Commission to decide what is the best use of this particular pot of funding right now, at this point in time. And I think the Energy Commission already has what it needs to make those decisions.

It's done a lot of work leading up to the AB 525 Strategic Plan. Matt gave a really excellent presentation this earlier today on the Moffatt & Nichol report, which will feed into the Strategic Plan, and that has some clear conclusions. I'm just going to quote, for emphasis, one of them, which Matt also said today.

> "The conclusion, of the port sites that were studied, staging and integration, operations and maintenance, and mooring cable laydown, S&I sites are the most critical sites that require urgent funding. These sites must be developed as soon as possible to provide the state with the best opportunity to achieve the

offshore wind planning goals. And the state will require three to five 80-acre S&I sites to meet the 2045 goals. And the report recognizes further that both Port of Humboldt and Port of Long Beach have announced projects to provide the acreage for all three to five of these sites."

So to me, that's really kind of the answer to the main question of today of what to do with AB 209 funds. And really every month that ticks by where we don't have certainty from the state about their commitment to those two S&I ports is more time lost toward our progress of meeting our first AB 525 goals and getting projects online in the early 2030s.

At the same time, offshore wind developers are looking for progress in the S&I ports of understanding, you know, final designs there, what the cost will be, is the timeline achievable, and they're going to need that information to be responding to power purchase contract solicitations from the central procurement entity in the next few years.

So just as Sloane was talking about there, or maybe it was Brian, there's sort of a this is happening in that developers need to know what's it going to cost and what's the timeline from ports. Ports need to know from developers, well, what's the actual timeline for you being

tenants? What is the total pipeline of the need? And the answer to that pointing at each other is start moving with big quantities of money now.

I think, you know, as Port of Humboldt and Port of Long Beach have described, as well, the success of the first offshore wind projects is very much tied to the success of the first S&I ports. It was really exciting to hear from the variety of ports and harbors that are interested in participating in this industry. Absolutely want to encourage that. We need a network of ports. There is enough offshore wind to go around. But I think it's a matter of those can maybe wait. Don't forget about them. Have that be part of the broader plan, but those can potentially wait.

And one way I think about is what are the key drivers? So for S&I ports, it's really state investment right now. We need that $43 million to be starting to leverage federal funds and private funds. And we've seen in the case of the Port of Humboldt, state money, even if it's not huge, huge quantities, does start to be able to pull in some additional federal funding, and private.

On the other hand, the key driver that I see for manufacturing ports is really about what is going to draw in those OEMs and supply chain companies to decide to invest in manufacturing facilities in California. And,

yes, the port location is important, the port feasibility, but it's really the pipeline of purchase orders that they're going to have from developers, which is tied to procurement.

And then lastly, manufacturing -- sorry, operations and maintenance, very important, but will be kind of tied to developers site servicing plans. And those, you know, have lower infrastructure investment fund requirements and can probably, you know, wait for a later date.

This certainly shouldn't be the last time that we talk about offshore port funding, and I think everyone here has echoed that. But for now, to me, it's really about focus on the S&I ports. And we have that sort of clear answer in the first two ports that have been investing on their own and making substantial progress toward what is already going to be a challenging timeline.

Finally, and Sean spoke to this a little bit, this is a time of great promise for the offshore wind industry in California and nationally, but it's also a time of some uncertainty. And we also have our, you know, friends and neighbors, like in Washington, sort of chomping at our heels to be part of this as well.

So what the state does with this money is an important signal to the state's commitment and strategic

leadership in the offshore wind industry, and California and the CEC should show the ports that have already stepped forward and are taking risks that the state recognizes them and is here to support them. Offshore wind needs decisive leadership. And for this AB 209 funding, that means investing in Port of Long Beach and Humboldt and doing it quickly. I would disagree a little with Brian about keeping this solicitation open. You have the funds. You have the authority. Dispense with them quickly.

Thank you.

MR. HARLAND: Got it. Thanks, Molly. And appreciate walking through the different port types in your comments because that was one of the questions that we actually had that we're looking for a reaction to, so I thought that was helpful.

And in the interest of time, I think we're going to kind of progress through the rest of the schedule.

So next up is going to be public comment. We're going to first do public comment in the room. So if you'd like to make a public comment today, there's a microphone at the podium that's up here, you can come up, stand in line, sit in the seats that are up there. We'll have a three-minute timer for those comments, so you'll see that up on the screen.

And then after we do public comment in the room,

we're going to do public comment through Zoom. So if you're on Zoom and you do want to make comment, please start using the raised-hand feature, that will put you in the queue.

And so I'll manage the public comment here in the room, and then when we get to Zoom, Hilarie, I'll let you manage those public comments.

So first up --

CHAIR HOCHSCHILD: Eli, just before we get to that, I just wanted to make one quick comment. And just let me thank everyone again for terrific presentations, and Molly, especially your comments at the end.

I did want to -- you know, I think there's been a lot of attention over the last few weeks on what's just happened in New Jersey and the, you know, the collapse of that particular project and the upward price trend with wind right now, you know, steel prices going up with the war and so on.

And I just wanted to, you know, really articulate for everybody, we are taking a long-term view on offshore wind. Our commitment is a long-term commitment. And, you know, if you look at all clean energy technologies, including offshore wind, the price trend over the long haul has been a downward trend, but there are periodic upward ticks in price, and that's what we're seeing now, you know,

caused by some external factors.

That does not change our commitment. Our commitment is a long-term commitment. And, you know, through innovation and through scale, we're going to drive the costs down. And this is foundational work that really we shouldn't get too distracted by, you know, events like what just happened in New Jersey.

I just want to articulate that because I think it's really important framing for, you know, how we view this resource and why the governor and the legislature have directed us to have these planning goals and work to build this industry. So I just wanted to make that point and look forward to the public comment.

MR. HARLAND: Great, thanks.

Okay, so it looks like we've got a couple that are going to make public comment. I invite you up to the podium. Name for the court reporter will be really helpful.

MS. KIRSHNER-RODRIGUEZ: Great.

MR. HARLAND: Thanks.

MS. KIRSHNER-RODRIGUEZ: Nancy Kirshner-Rodriguez, as of Monday, the Oceantic Network, formerly the Business Network for Offshore Wind. And my comments today is, A, to thank the Energy Commission and, of course, the State Lands and others that have been here today. But we

are so pleased to see this focus on ports now and really delving into the next portion of the work that is ahead. And the Network was very proud to work with our Ports Working Group, which I coordinate, but I'm very grateful to Brian Sabina for his expertise and the team that we put together to put this report together. And I think it gives a lot of context.

We do recognize, and I want to mention that one of the other things that we do do is in our priorities and focus are on supply chain. And now we have over 550 California-based companies that have entered our Supply Chain Connect Project. And we also are extremely committed to the long-term work that it's going to take to build out a domestic supply chain. And I think you heard a lot today about how integral the ports are to figuring that all out.

So thank you very much.

MR. HARLAND: Thank you.

Okay, next up.

MS. ANDERSON: Before we move on, can she -- we need to have everybody spell their first and last name for the court reporter. So can the last commenter come back and do that?

MS. KIRSHNER-RODRIGUEZ: Sorry. No problem. Nancy, so N-A-N-C-Y, Kirshner, K-I-R-S-H-N-E-R, and then hyphenated Rodriguez, R-O-D-R-I-G-U-E-Z. Thanks.

MS. ANDERSON: Great. Thank you.

MR. JACOBSON: Thank you very much. My name is Dan, D-A-N, Jacobson, J-A-C-O-B-S-O-N, Senior Advisor to Environment California.

First, I really want to thank everyone up here on the dais, the California Energy Commission, the State Lands Commission, for not just today but really for your years of dedication to offshore wind. It's easy to think that this is just something that we're wrestling with right now, but for those of us that have been involved in it a while, we know it's been your almost, well, probably more than a decade thinking about this. And it's because of your dedication that we're in such a good place right now. So thank you all very much for your work on this.

One point I would make is that going forward on panels like this, I also -- I'm really glad that the ports were able to come, but we should try to expand the panels so that they include folks from labor, folks from the communities can come in, because there's a lot that we want to hear from them and really make sure that we can speed this process up is going to include getting good communication.

There's three points that I want to make in terms of the funds. The first is on the 209 grants. I think that any time the state is giving out money to the ports

for offshore wind, we should try to look for triple bottom line winds on this. So the first is, how can we be accelerating clean energy to stave off the worst impacts of climate change? Two is, how can we be cleaning the air in and around those ports for the communities that have been disadvantaged on that? And three is, how do we require that the ports really involve with community engagement?

It's so good to hear all the ports here with clean energy plans, with climate plans, with community engagement plans. The state should be rewarding the ports that do such a good job to be able to do that.

The second thing I would encourage people to do, and I was just over at the swing space and got an earful from a bunch of staffers saying, hey, the ports need to spend that money that we gave them. So I think a couple people have already said that. I would just encourage you to be able to do that. That's going to be critical going forward.

And then three is, in 2024, I think there is an opportunity, a political opportunity to get engaged here. There is a potential for a climate bond that could go on the ballot. If such a bond were to go on, it would be fantastic if we could include money for ports that are doing offshore wind. There is a coalition that's been established that includes labor, that includes business,

environmental groups, environmental justice groups, many of the ports. That coalition is critical, and we need to be able to engage the governor's office leadership in the state legislature to encourage them to look at the great opportunity and the return on investment that investing in the ports that are doing offshore wind will provide to the state.

So I'll yield back the rest of my time. Again, want to thank the CEC and the State Lands Commission. Thank you.

MR. HARLAND: Thank you for your comment.

Hilarie, I don't see anybody else lining up in the room for in-person public comments, so if you have hands raised on Zoom, I'll turn it over to you.

MS. ANDERSON: Great. Thank you so much. Yes, we have about eight hands raised. We will start by going down the list of the first that I had.

And for individuals that are on Zoom, if you're calling in by phone, please press star nine to raise your hand and star six to unmute when you're called upon. I'll open your line. Please make sure to unmute on your end. For the record, you're going to state and spell your name and give your affiliation, if any, and then begin with your comment. We'll show a timer on the screen that will alert you when your time is up, and then all comments will become

part of the public record.

I will go in the order of the hands that I see received, so first I have Greg Hurner.

Greg, you should be allowed to talk now.

MR. HURNER: Great. Thank you very much. Greg, G-R-E-G, Hurner, H-U-R-N-E-R, on behalf of American Waterways Operators, the tug, towboat, and barge association.

I think you've had some fantastic comments today. I particularly liked Matt Trowbridge's comments about the needing to confirm the capacity of the tug and barge industry. And, of course, you had Foss offshore wind there to provide some perspective in that regard.

I think in this, in looking at this perspective, one thing that you need to look at is workforce development. The industry needs more workers. We had some supply chain disruptions during the COVID pandemic which brought to light some of these challenges. And that's going to be a very important component for the tug industry.

In addition, you have sister agencies that are imposing significant burdens on the industry, including the Commercial Harbor Craft Rule which was predicted to cost the tugboat industry $1.3 billion before inflationary COVID factors affected the industry. And that is just to upgrade

the existing fleet that operates in California. That is not to build new vessels that will be necessary to meet the requirements of offshore wind.

So we strongly encourage more investigation in this area and to not leave out these downstream support industries that are going to be critical to ensuring both the development and ongoing maintenance of this new industry in California.

Thank you.

MS. ANDERSON: Thank you for your comment.

Okay, so we'll move on to the next person that I see, and that is Chanel Wynn [sic].

Chanel, just as a reminder, you will -- I'll unmute on my end -- or I'll give you permission to talk, you unmute on your end, and state and spell your name and any affiliation you might have. You should be able to unmute on your side, if you can. I see you've unmuted, but I don't hear you.

MR. REED: This is John Reed. Are you trying to --

MS. ANDERSON: Oh, I'm sorry. Your name says Chanel -- or ChannelWind. I'm sorry.

MR. REED: Oh, okay.

MS. ANDERSON: I don't have a name, so please state and spell your name and then --

MR. REED: Okay.

MS. ANDERSON: -- and give your comment.

MR. REED: Okay. thank you. This is John Reed, and I'm with ChannelWind LLC in Santa Barbara, California. And I'm happy to hear all the comments about ports and the go-forward plan and, of course, this opportunity to share in the public money that's coming from the CEC and California.

And I just wanted to spend a little time talking about our project because it's going to take an effort between many different partners to pull it off, and that is to create part of the capacity delivery system using a floating port facility, mobile port facility concept, as stated in last September's report from NREL, that it's a disruptive technology that I think our state should try to be part of. The beginning studies and the beginning feasibility, there's lots of advantages from a process manufacturing supply chain point of view. There's also advantages to not disrupting as much shoreline space in our beautiful state.

And if you want to know more, anyone on the call, reach out to info@channelwind.com. I'm just a small startup in Santa Barbara. I met Matt before, so it's good to hear you again today, Matt.

And yeah, just looking forward to this industry

taking off and allowing small companies like ours to get some seed funding and solve some of the biggest problems that could help not just the state, but our whole country and maybe the world.

Thank you.

MS. ANDERSON: Great. Thank you so much.

And I'm going to reset our clock here. We'll go on to our next commenter.

Alihan [sic], you should be able to unmute on your end and --

MS. HAHM: Hi. Can you hear me?

MS. ANDERSON: Yes. Please state your name and spell your name and any affiliation you might have and then start your comment.

MS. HAHM: Thank you. My name is Allison Hahm, A-L-I-S-O-N H-A-H-M. I'm an attorney with Natural Resources Defense Council's Environment, Equity, and Justice Center, and a proud member of the Impact Project, which includes community based organizations, environmental justice groups, and academic institutions, as well as national environmental NGOs.

NRDC supports the development of offshore wind off the coast of California to meet the state's clean energy and climate goals. And we welcome the work of CEC to develop a program to support the development of this new

renewable energy infrastructure.

NRDC also believes that it's crucial to advance offshore wind in a way that minimizes negative ecological consequences and maximizes benefits to port-adjacent communities, communities that are already disproportionately burdened by industrial operations and extreme air pollution from truck and ship emissions. It's our hope and expectation that offshore wind development will improve life expectancy in communities living on the front lines of industrial and port operations.

For this reason, we urge CEC to first maximize community benefits. Offshore wind projects must require use of zero-emission vehicles, equipment, and infrastructure during project construction, operation, and maintenance. We also hope that offshore wind projects will invest in charging infrastructure to support zero-emission equipment and vehicles at project sites.

Second, CEC must remediate waterfront facilities with legacy pollution from previous industrial uses before workers commence offshore wind-related operations to ensure worker safety and health.

And finally, we urge CEC to promote a rapid phase-down of fossil fuel infrastructure and other polluting sources in conjunction with clean energy infrastructure development to avoid a potential increase in

cumulative impacts from offshore wind-related construction, maintenance, and operations.

In conclusion, I'd like to thank CEC for facilitating today's workshop, initiating community listening sessions, and reaching out to tribal nations to discuss the benefits and potential risks associated with offshore wind development. We urge CEC to include more community voices and perspectives from tribal nations and workforce during the next workshop. Strengthening and continuing this open dialogue is vital to ensure the offshore wind industry is a catalyst for improving quality of life, in port-adjacent communities, and advancing environmental justice.

Thank you so much for your time.

MS. ANDERSON: Thank you so much.

We'll go on to our next commenter, Adam Stern.

Adam, please unmute on your end. State and spell your name and any affiliation, and start your comment.

MR. STERN: Thank you, Hilarie. It's Adam Stern, Executive Director of Offshore Wind California. My first name is spelled A-D-A-M. Last name is Stern, S-T-E-R-N.

Very pleased to experience and watch this presentation today. Congrats to the leadership from the CEC and the State Lands Commission for organizing the panels.

One of the things that I find very inspiring in listening today is just the overall presentation from Matt, which articulated a growing confidence that the multi-port strategy that is described can actually be achieved, and to see the detail of all of the different components and the way in which this could work from north to south to support the offshore wind sites, I think, is a big confidence booster for the overall industry.

There is an urgency here to get the funding out the door that is available, and so I echo Molly Croll's comments about supporting particularly the staging and integration ports, which clearly are central to achieving our goals here, and doing that as promptly as possible, and also acknowledging some of the other needs that have been described in terms of the operating and maintenance sites.

I also want to put a finer point on the opportunity for the climate bond and for including up to a billion dollars in funding in that. As Dan Jacobson described, this is a way to leverage the state's borrowing capacity. Something like port investment deserves to be financed to some degree by the credit of the State of California. It's on a scale of investment that bonds are appropriate for. And we have an opportunity in 2024 to put this in front of the voters, give them a chance to vote yes on offshore wind, among all the other things that we want

to support in terms of climate resilience and preparing us for the climate future that is ahead.

So I'm very encouraged by the, you know, overall conclusions of this panel, the set of panel presentations, and support moving as expeditiously as possible and sending the funding from AB 209 out, as well as looking ahead to bigger investments that could be achieved through a climate bond.

Thank you very much.

MS. ANDERSON: Thank you, Adam.

We'll set the clock here and we'll move on to our next commenter.

Sheri Hafer, you should be able to unmute on your end.

MS. HAFER: Can you hear me?

MS. ANDERSON: Yes, you can. Please state and spell your name and any affiliation.

MS. HAFER: Okay. My name is Sheri Hafer, that is S-H-E-R-I H-A-F-E-R, and I'm the Secretary of the Central Coast Women for Fisheries.

The California Constitution only uses the word "absolute" in reference to one fundamental right. It is not freedom of speech, press, privacy or religion, which some might expect. It is a freedom enjoyed and protected by all who fish in public trust waters of the state of

California, reserving in the people the absolute right to fish thereupon. Absolute means something that is free from any restriction or condition.

So the endeavors that you go forward with in altering our ports, in doing that, you must mitigate for fishing. There will be impacts with increased ship traffic. There will be competition for fuel dock supply and for dock space. There will be times when the harbor has to close in order to move the turbines. And there'll be dredging. All these impacts must be mitigated and a plan must be in place before you begin activities.

Thank you.

MS. ANDERSON: Thank you.

We will move on to our next commenter, Tom Hafer.

Tom, you should be able to unmute on your end. Please state and spell your name, give any affiliation, and begin your comment. Tom, you'll have to unmute on your end. Okay, I'm going to move on to the next commenter and we'll come back to you, Tom.

Sachel Canes (phonetic), I don't know if that's a company or -- so we'll open your line. Please state and spell your name and affiliation.

MR. RAY: Can you hear me? Can you hear me?

MS. ANDERSON: Yes. Tom, we're going to come back to you in just a moment. We can hear you now.

MR. RAY: You can hear me?

MS. ANDERSON: Oh, who is this? Yes.

MR. RAY: Okay. Yeah, well, I'm using Sachel Canes' phone, so I guess that's what showed up on your screen. My name is Steve Ray.

MS. ANDERSON: Okay.

MR. RAY: Can I speak?

MS. ANDERSON: Yes.

MR. RAY: Hello? Yes? Okay. Yes, my name is Steve Ray, that's S-T-E-V-E R-A-Y, nice and easy.

I work with a lot of nonprofit, NGO, and community groups up and down the coast of California. I've been involved in this for nearly 40 years. And I wanted to speak to you about public participation in this process.

First of all, let me congratulate you. This has been an excellent panel. It was nice to hear from Moffatt & Nichol and all of the work they've been doing, and from the ports, from the industry, from the investment community. But what's a little silent is the voice of the public here. And I would like to come up.

I have a suggestion for you, because there are many people out here in the communities that are going to be directly or indirectly affected by these ports, by these windmill operations, and by all of the other ancillary businesses that are going to be needed to support them.

And I would suggest that at your councils, in your meetings, in your workshops, there should be regular citizens, as it were, sitting in on those. We can represent various groups. We represent different communities. But we represent the regular citizens of the state. And I think we need a voice in this process.

If California is going to be a driver in this nationwide and set the example for everybody, I would recommend that since you have this proposition money, or AB 209 money, and there is a provision in there for other types of investments, I would suggest that maybe a small portion of that be reserved to help fund nonprofit and community groups who can be involved in this process, who can bring some knowledge and experience and capability to the table and participate more fully in this. Funding is always a difficulty, as you probably know, for nonprofit groups. But if there is a grant program that would enable groups to participate in this on an equitable level, I think that would be helpful.

So I would ask that in your considerations you look at the possibility of creating some sort of grant program for nonprofit groups that would enable that participation.

And with that, I thank you very much.

MS. ANDERSON: Thank you for your comment.

Okay, we are going to try and go back to Tom.

Tom Hafer, you should be able to unmute your line.

MR. HAFER: Can you hear me?

MS. ANDERSON: Yes, we can hear you now great. So if you could state and call your name, give any affiliation and start your comment?

MR. HAFER: Tom Hafer, T-O-M H-A-F-E-R. I'm the President of the Morro Bay Fishing Organization [sic].

I heard a comment, and I think it was somebody from Crescent City, that it's a myth that commercial fishing will not be impacted. That's not true. We're going to be impacted with everything that goes on in the ocean. We're going to be impacted by cable lanes. We're going to be impacted by call areas. And if the State of California wants to put 25 gigawatts of wind in by 2045, we keep hearing, it's going to devastate and it's going to affect the commercial fishing and sport fishing in the state of California.

And I don't know why nobody will recognize that. It's like everybody's throwing the commercial fishermen under the bus. It's not right. I mean, just the call area alone off Morro Bay that's 400 square miles or whatever it is, 376 or 400, I don't know what it is now, but we're not going to be able to fish there anymore. That's an impact.

They're going to be pounding and trenching the cables, that's going to be an impact, not just the fishermen, it's going to devastate the fish, the rockfish.

So when people say that it's a myth that commercial fishermen won't be impacted, that's not true. And I wish BOEM and whoever is running the show on this whole offshore wind thing would recognize that because we are going to be devastated from this. And it's going to cause a lot of impact.

Thank you.

MS. ANDERSON: Thank you for your comment.

I'm going to go on to the next commenter, and that's Thalia Kruger.

Thalia, your line is open. You should be able to unmute on your end. And state and spell your name, your affiliation, and make your comment.

MS. KRUGER: Thank you very much, Hilarie. My name is Thalia Kruger, it's spelled T-H-A-L-I-A, last name Kruger, K-R-U-G-E-R, and I represent Principal Power, the California-based technology leader in floating technology.

My comments are first to applaud the California Energy Commission and the Lands Commissions for organizing this excellent workshop. I also applaud all the presenters because they have been very engaging and bringing up the reality to what we are facing in the industry.

My comments are related. I would like just to call your attention that whenever we are discussing ports, staging and installation of ports or manufacturing ports or marshalling ports, we need to pay attention to the wet storage. I saw the plans of -- the schematics of the ports that were presented, and I didn't see that taken into consideration. Maybe I missed something, but it is very important. In Principal Power, if we find that if there is no wet storage capability, then that's going to be a bottleneck for the large-scale deployment of floating wind in California.

And also, the second comment that I have is the long-forward view of preparing the ports for large corrective activity, so also looking into what are the characteristics of the ports that are going to be needed in 20, 15, 20 years, whenever we need to have that kind of activity.

Thank you very much.

MS. ANDERSON: Thank you.

And let's see, that was the last hand I saw raised, so I'm going to do one more call for any raised hands for comments in the public comment section. If you have -- if you're calling in from the phone, you can do star nine to raise your hand if you're calling in, otherwise, it looks like a raised palm on the bottom of

your screen. Okay, I'm seeing no more hands.

I just want to remind everyone that we're also accepting written comments, which are due by December 1st, so that's next month.

And this will conclude the public comment period, and I'm going to send it back to Eli.

MR. HARLAND: Great. Thank you, Hilarie, and thanks everyone for hanging in there and making comments.

Before I close out the workshop with a few reminders, I did want to invite Chair Hochschild, Commissioner Monahan, and Jennifer Lucchesi to make any closing remarks before we close ourselves out.

So go for it, Chair.

CHAIR HOCHSCHILD: Great. Well, thank you so much, Eli, for all the work. This was a really, really robust workshop today, and I just am very grateful. It felt like a pretty thorough tour through all the possibilities with the various port investments we can make.

And to the earlier comment by the member of the public about public comment, there will be many, many more opportunities for public comment, in addition to wind-specific events like this and others that we'll be hosting. Members of public are always welcome at our monthly Energy Commission meetings to provide public comment on any topic,

including offshore wind. So we welcome that and look forward to much, much more public engagement as we go forward.

And let me also just thank, again, Jennifer Lucchesi from the Lands Commission for being just such a terrific partner in this work and looking forward to building out this program successfully in close collaboration with the Lands Commission and all the stakeholders here.

And with that, I'll pass it off to my colleague, Commissioner Monahan.

COMMISSIONER MONAHAN: Well, I, too, I feel like my head is exploding a little bit. That was a lot of information to share, and so I really appreciate all the panelists for sharing their expertise and giving us a lot of food for thought. And I think, as the Chair said, we're, as a state, are just deeply committed to making this happen.

And so we want to learn how to do it right, how to do it in the most cost effective way, how to do it with the most sensitivity to the needs of communities, to the environment. Really heard the message from commenters about the importance of engaging communities and engaging labor and making sure that this is a really robust collaboration, that we're hearing from all stakeholders and

just taking that to heart.

But just this was -- I feel like, you know, we need to do this for the sake of moving California to a 100 percent clean energy future. You know, we were lucky this summer with wildfires, although not so lucky right now. And I think California has really been feeling the impacts of climate change very acutely. And this is a key part of our decarbonization strategy, but we have to do it right, and we have to do it with a lot of sensitivity for communities and making sure that this is part of an economic driver for the state of California going forward, so thanks, everybody.

And I'm not sure, any other comments from the dais?

CHAIR HOCHSCHILD: I think Jen Lucchesi was going to say a few words.

COMMISSIONER MONAHAN: Oh, Jen, are you? I can't see if you're there.

MS. LUCCHESI: That’s okay.

COMMISSIONER MONAHAN: You're very small on my screen.

MS. LUCCHESI: Yeah, I don't think I could say it any better than you, Chair Hochschild and Commissioner Monahan. Thank you both for your leadership. And I just learned so much from these last three and a half, four

hours. And I'm incredibly grateful for all of our panelists for spending so much time with us today, especially on a Friday afternoon and traveling so far for many of you. And equally grateful for the public comments that we received.

So thank you, and I look forward to continuing to learn and partner with you all. Thank you.

MR. HARLAND: Yep, agreed. Thank you so much for everybody who came to participate actively in the workshop today. We wouldn't have a workshop if we didn't have content. And so you came and provided that content, especially all of those that traveled in person, greatly appreciate it.

Also wouldn't have a workshop if we didn't have folks supporting us to leading up to the workshop and in the workshop itself. So just real fast, I wanted to thank Hilarie Anderson for all of your support on Zoom today. You really make this stuff happen, and it feels like it's magic, and I know it's a lot of work. So Hilarie, thank you so much.

Kevin, who's in the back, is our IT support and really helped us out today.

And then the Energy Commission, you probably interact a lot with folks who are on the kind of technical side or the policy side of this, but also wanted to thank

Bill Dietrich and Kelli Nishimori, who are both of our attorneys assigned to help us with this program, and they're transactions experts. So thank you to both of them. And Lizzie Barminski, who's my partner in this program, helped prepare for the workshop today.

Just a reminder, the slides from today, as soon as we get them prepared and ready to be posted in an ADA-compliant way, we will be posting those to the docket. We'll send out a message. The workshop was recorded through Zoom today. That Zoom recording will probably be the first thing that's available that we'll post there. Also, the workshop is being transcribed, so a transcript will be available.

Again, encourage everyone to sign up for the LISTSERV specifically for this program. It's available on the website at the URL listed on the slide.

And again, to remind everyone, written comments by December 1st would be much appreciated. You can use our e-commenting system to do that. You can also submit written comments directly to our Dockets Unit. The email for the docket is on the slide.

So with that, we're going to adjourn, and we're closed out. Everybody have a fantastic weekend and safe travels home.

CHAIR HOCHSCHILD: Thanks, everyone.

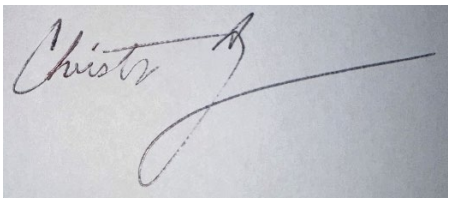
(The workshop adjourned at 4:58 p.m.)

REPORTER'S CERTIFICATE

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

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

IN WITNESS WHEREOF, I have hereunto set my hand this 16th day of November, 2023.



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Chris Caplan
Electronic Reporter
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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

November 16, 2023