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CALTEORNIA	ENERGY	COMMISSION

COMMITTEE EVIDENTIARY HEARING

IN PERSON AND REMOTE VIA ZOOM

THURSDAY, AUGUST 21, 2025 10:00 A.M.

Reported by: Elise Hicks

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Noemi Gallardo, Associate Member

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James Qaqundah, Advisor to Commissioner Gallardo

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Shahab Khoshmashrab, P.E., Facility Design Unit Supervisor, CEC

James Ackerman, P.G., Engineering Geologist, CEC

PUBLIC ADVISOR

Ryan Young, Deputy Public Advisor, CEC

SPANISH INTERPRETER

Aaron Vargas Rivas, Spanish Interpreter, CIT Giselle Franco, Spanish Interpreter, CIT

APPLICANT - GEM A-CAES LLC / HYDROSTOR

Curt Hildebrand, Senior Vice President, Hydrostor

Victor Grille, Construction Director

Laurel Lees, Director of Environmental and Permitting

Samrat Mohanty, Geotechnical Engineer

Jeff Harris, Attorney, Climate Edge Law Group

Samantha Neumyer, Attorney, Climate Edge Law Group

INTERVENORS

Zeynep Graves, Attorney, Center for Biological Diversity

GOVERNMENT AGENCIES AND TRIBES

Lorelei Oviatt, Kern County Planning and Natural Resources Director, representing the Kern County Board of Supervisors

GOVERNMENT AGENCIES AND TRIBES (cont'd)

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Lena Germinario, California Department of Fish and Wildlife
Derek Kliewer, California Department of Fish and Wildlife
Miguel Sandoval, Air Quality Engineer, East Kern Air
Pollution Control District

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Peter Thyberg, Senior Staff Counsel, California Department of Water Resources, Division of Safety of Dams

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Scott Crawford, Biology Group Manager, WSP USA, Inc.

David Stein, PE, Senior Vice President, WSP USA, Inc.

BIOLOGICAL RESOURCES PANEL (cont'd)

Laurel Lees, Senior Director, Development and Permitting,

North America, Hydrostor, Inc.

Cody Niehus, Development Manager, Hydrostor, Inc.

Chris Huntley, Senior Wildlife Biologist, Aspen Environmental Group

Ileene Anderson, Senior Scientist and California Deserts Director, Center for Biological Diversity

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Victor Grille, PE, Project Director, Hydrostor Inc.

Lucas Thexton, Engineering Manager, Hydrostor Inc.

Samrat Mohanty, PhD, PE2, VP of Mining and Geotechnical, Hydrostor Inc.

Brett Fooks, P.E., Safety and Reliability Branch Manager, CEC

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CAVERN CONSTRUCTION PANEL

Victor Grille, PE, Project Director, Hydrostor Inc.

Lucas Thexton, Engineering Manager, Hydrostor Inc.

- Samrat Mohanty, PhD, PE, VP of Mining and Geotechnical, Hydrostor Inc.
- Curt Hildebrand, PE, Senior Vice President -- Commercial Affairs, Hydrostor Inc.
- David Stein, PE, Senior Vice President, WSP USA Inc.
- George Wegmann, PG, CHG, Vice President, WSP USA Inc.
- Jesse Steele, Assistant Vice President Environmental, Health and Safety, WSP USA Inc.
- Kevin M. Delano, P.G. M.S., Engineering Geologist (Geology, Paleontology, and Minerals), CEC
- Kenneth Salyphone, Mechanical Engineer/Inspections Unit Supervisor (Efficiency and Energy Resources, Facility Reliability), CEC
- Ardalan Raisi Sofi Ph.D., P.E., Mechanical Engineer (Noise and Vibration, Facility Design), CEC
- Shahab Khoshmashrab, P.E., Facility Design Unit Supervisor, CEC
- Alvin J. Greenberg, Ph.D. (Worker Safey and Fire Protection, Hazards, Hazardous Materials/Waste, and Wildfire), Risk Science Associates
- Huei-An (Ann) Chu, Ph.D., Air Resources Engineer, (Public Health), CEC

PUBLIC COMMENT

Rick Webb, Rosamond Community Services District

Joel Mackay, Rosamond Municipal Advisory Council

Lorelei Oviatt, Director, Kern County Planning and Natural Resources, representing the Kern County Board of Supervisors

Neal Desai, National Parks Conservation Association

Anthony Myers, Safe Haven Kids Leagues of California City, and Safe Haven Kids Lead Community Resources of California

George Hodgkinson, President, Mojave Chamber of Commerce

Richard Chapman, Kern Economic Development Corporation

Drew Mercy, Antelope Valley Economic Development & Growth Enterprise

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2 | 10:01 a.m.

THURSDAY, AUGUST 21, 2025

HEARING OFFICER WEBSTER-HAWKINS: Welcome. The time is 10:01 on August 21st, 2025. This is the California Energy Commission's Evidentiary Hearing for the Willow Rock Energy Storage Center.

(Spanish Interpreter's channel overlays the English channel.)

HEARING OFFICER WEBSTER-HAWKINS: I'm going to take a moment just for a tech check. Okay.

This is the Energy Commission's Evidentiary
Hearing for the Willow Rock Energy Storage Center, Docket
number 21-AFC-02.

I'm Renee Webster-Hawkins, the Hearing Officer for the Committee that the Energy Commission assigned to oversee this proceeding. I hereby open the evidentiary hearing on the application for certification, or AFC, pursuant to CEC Regulations section 1745, as stated in the notice filed in the docket for this proceeding. The primary purpose of today's evidentiary hearing is to take evidence on the supplemental application filed by the Applicant for the Willow Rock project.

Today's evidentiary hearing is being conducted both in person and remotely with the assigned Committee,

representatives of the parties, Staff from the Public Advisor's Office, and the Hearing Officer appearing in person here at the Mojave Air & Space Port, Stuart O. Witt Event Center.

Some of the agency representatives and expert witnesses are appearing in person and others will appear remotely. The public is participating both in person and via Zoom.

Be advised that all statements being made today are being transcribed by a certified court reporter, and the court transcription will be available in the docket approximately one week following the event.

The event is also being recorded via Zoom, and the unofficial Zoom recording will be available on the project webpage as soon as possible following the hearing.

We deeply thank the community of Mojave and Rosamond and the Mojave Air & Space Port for hosting the California Energy Commission at this event today.

As noted in the pre-hearing slide loop, we are offering Spanish interpretation here in the room and on Zoom. If you are in person and need a headset to hear the interpreter, please visit the interpreter's table to the left side of the dais through the double doors and the interpreter has headsets available for people who need them. If you are on Zoom, you may also listen to the

Spanish interpretation.

May I kindly ask our interpreter, Aaron Vargas, to provide the instructions in Spanish on how to access the Spanish interpretation in the room and on Zoom?

SPANISH INTERPRETER: Yes, Aaron Vargas is present. Okay.

(Whereupon the interpreter translates instructions from English to Spanish.)

HEARING OFFICER WEBSTER-HAWKINS: As stated in the notice for this event, the evidentiary hearing was scheduled to take place over two days from 10:00 a.m. to 5:00 today and tomorrow if needed. However, after discussion with the parties at the prehearing conference and in the order thereafter, the Committee proposes a schedule in which the hearing may reach adjournment this evening. We may extend today's session by an hour or so if adjournment is foreseeable this evening.

If we conclude the evidentiary hearing today, there will be no event tomorrow, and the Presiding Member will post a notice of adjournment in the docket and on the front door of this event center tonight.

So here is a high-level schedule for today's hearing. We'll begin with introductions and opening remarks by the Committee presiding at today's hearing. Then I will provide a brief summary of the Willow Rock

application for certification and the status of this AFC proceeding. I will outline a few of the rules applicable to the evidentiary hearing, and also explain the informal procedure that we will use today for oral testimony.

Then we will turn to any evidentiary motions in limine on the exhibits identified, if any, and seek to move documentary evidence into the record.

After that, we will take public comment initially as a courtesy to those who would like to participate without waiting until the end of the day. We will also take public comment at the end of today, regardless of whether we conclude the evidentiary hearing or not.

After public comment, we will start receiving oral testimony. First, I will call the witness for the Eastern Kern Air Pollution Control District to certify the Final Determination of Compliance. We will then convene a panel of experts on the biological resources topics. That will take us to a lunch break. After lunch, we will convene a panel of experts on the water resources topics that have been identified. And then our last panel, after a short break, will focus on cavern construction.

Our last orders of business will be to invite closing statements by the parties, a final round of public comment, the close of the hearing record, and then to discuss any post-hearing briefing desired by the parties.

So let's start with introductions.

The California Energy Commission is the energy's primary energy policy and planning agency, and it's leading California's goal to achieve 100 percent clean electricity by 2045.

The Energy Commission, or CEC, is led by five Commissioners appointed to five-year terms to guide and oversee the policy for the state of California. The proceedings for the Willow Rock AFC are being managed by a Committee of two of our five Commissioners who are appointed by the CEC.

So the Committee joining us today on the dais includes Commissioner Andrew McAllister, Presiding Member. His Advisor, Maggie Dang, is appearing remotely with us today. Commissioner Noemi Gallardo is the Associate Member on this Committee, and her Advisor, Jimmy Qaqundah, is with us today on the dais. And as I mentioned, I am Renee Webster-Hawkins, the Hearing Officer.

So first I'd like to ask the Commissioners if they have any opening remarks as we open up the evidentiary hearing on this application for certification.

Commissioner McAllister? No. Do that. Yeah.

Yeah.

COMMISSIONER MCALLISTER: Great. Thank you, Renee, and thank you and your team for helping put this

together and working with all the parties to bring us here today. Really happy to be here today. I feel like this day, this moment, has been a long time in coming, and we're going to hear all about the project forthwith today.

But I just wanted to first thank everyone for being here, the Hearing Officer and the team, as I said, the CEC Staff, Public Advisor's Office, as well as the Applicant and the Intervenors and the staff and leadership at Kern County. Thank you for being here and just, you know, holding hands with all of us through this whole process. Just really great to have you at the table and so capable of representing the county and the public in the county.

The agencies who we'll hear from, I believe, all of them today, the Eastern Kern APCD, we'll hear from them, the Department of Safety of Dams, Division of Safety of Dams, CDFW, and the county, as I said, the cities of Rosamond and Mojave, just really, there are a lot of partners here that go into this conversation and that we must include in this conversation. That's what the process is for. So hearing everyone involved is primordial. That's how we get to good decisions. They're in the interest of the state of California, the public, and the people who live here.

I also want to thank Mojave Air & Space port for

hosting us here. Beautiful facility. And, also, it's great not to have any technical issues as we go through these days, these sorts of hearings, so we can really focus on the task at hand. So thanks for a great facility.

So I'll be very brief just in my comments. I think, as I said, this has been an extended process, and, you know, a number of things have changed between when we first engaged the AFC. The docket number starts with 21, which is 2021, so we've been doing this for a while.

But I just want to really commend everyone for their perseverance, certainly the Applicant, trying to figure out how to make this project as good as it can be, and all the parties that I listed, including particularly the Intervenors, for bringing diverse perspectives and sort of critical perspectives. And that's how, you know, when we're exposed to all of the challenges, you know, in real time, I think it helps projects get better, dealing with all the things that may happen, that are likely to happen, and that we know will happen, and trying to work through those so that we can get to, you know, a feasible outcome and reach a good decision, whether it's to the positive or not.

So, you know, as we know in California, we do have a need for a diverse array of supply resources and demand resources to help our electric system really be the

backbone that it needs to be for our decarbonization journey, to enhance reliability, to manage costs, and really feed the process of procurement that the utilities all go through to provide the services that all Californians need. And so it's in that broader context, you know, that we're having this discussion around this compressed energy storage project here.

So I want to thank my partner on this,

Commissioner Gallardo, who brings -- I think we complement
each other nicely. I tend to bring a sort of technoeconomic approach to my lines of questioning and how I
look, the lens through which I look at investments, you
know, potential large capital investments in the state like
that, like this one. And having a legal mind on the case
is very helpful. I'm not an attorney. So I think we kind
of cover all the bases together.

And also, Jimmy, Commissioner Gallardo's Staff, Jimmy in particular, who's been great on this.

And, Ryan, I want to thank you for also being here, making sure that the public has every opportunity to be heard.

I'm also going to just make a quick comment in Spanish, because I think it's important that the public know that there are actually members of the Commission, two of us actually you have here on the dais, who speak

1 Spanish. So we are actually really listening. (Speaking 2 Spanish.)

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Okay, so with that, thanks very much. And I'll pass it to my colleague, Commissioner Gallardo.

COMMISSIONER GALLARDO: Buenos dias. Good Thank you so much, gracias, Commissioner morning. McAllister, for your leadership, and also for that I think it's very important for us to connect commentary. with all communities who could be affected by the work that we're doing and the decisions that we're making.

So I also wanted to thank Hearing Officer Webster-Hawkins for her leadership, for her organizing, and the entire team.

And I'll keep my remarks short as well, but I was out of the country, so I apologize for missing any of the very important activities. But I wanted to make sure that we could proceed with this work and I did not want to delay things. I apologize for missing, but I'm very glad to be here today with you all.

And I also wanted to express that there has been a lot of work that has gone into this proceeding. an example, the evidence of all the work. This is the Final Staff Assessment. But it is a reflection of all the collaboration that has happened here with the Applicant, Hydrostor, which we really appreciate how collaborative

you've been in sharing information, the entire Staff of the California Energy Commission, so really appreciate you for all your diligence, the parties and the Intervenors who have been participating, our peer state agencies, also the Tribal nations, and the local government representatives as well.

So just want to make sure that we acknowledge how much goes into this, and we appreciate it. And we'll be making a much more informed decision because of all of the information we have here.

So I'll leave it at that. I did want to express my condolences for the loss of Daryl Harrison, but I believe we are going to have a moment again to be able to do that.

So I'll leave it there and hand it back to you, Commissioner McAllister, or Hearing Officer Webster-Hawkins.

COMMISSIONER MCALLISTER: Thank you. Thank you. Oh. Thank you, Commissioner.

And I want to reiterate the thanks to all the parties and Staff and just the immense amount of back and forth and work that, like, we as a Committee don't have to deal with every day, but that we know there's a lot of heavy lifting and digging and assessing and critical thinking going on, and has been for now several years. So

really appreciate the Applicant's contribution to that back and forth and the staff.

And as all of you know, but maybe for the public, you know, the staff -- the Energy Commission is kind of a unique regulatory body. Much of what we do is very collaborative with our Staff. But the siting proceedings that largely Commissioner Gallardo leads, overall, those require Staff to come to the table, to come to these discussions as a party, separate from the Energy Commissioners. And so I just wanted folks to appreciate that. And Staff takes that role very, very seriously, and, you know, as does the Applicant and all the Intervenors.

And so I think the formality of this proceeding is somewhat, you know, limited to our siting cases and a few other cases at the Commission. And so those of you who do routine interactions with the Commission on many fronts will sort of note the difference of the level of formality of a siting application, like the one we're in today.

So thanks again for your attention.

And back to you, Hearing Officer Webster-Hawkins.

HEARING OFFICER WEBSTER-HAWKINS: Thank you,

22 Commissioners.

Before I turn to the introduction of the parties and other participants, I do want to cover a bit of housekeeping to ensure that everybody in the room and on

Zoom knows who is speaking and can hear what is being said.

For the parties and government agencies here, when you are introducing the members of your team, please offer their names, titles, and organization.

For the people who are speaking here at the Mojave Air & Space Port, you will see we will have two floating microphones for the parties, witnesses, agency representatives, and public comment to address the Committee. And so we ask for all participants' cooperation in sharing and passing the microphones as needed.

Julie has, thank you, graciously offered to assist with moving the microphones around the room between counsel and the witnesses and public commenters. So we ask that you wait until you have a microphone before speaking. If you speak without the microphone, it will not be heard by the Committee, the court reporter, or any other member of the proceeding.

For people speaking or participating via Zoom, we do ask that you turn on your camera if you are able. And for everyone's benefit, including for the court reporter and those listening on Zoom, anytime anyone speaks, please state your name clearly each time before speaking. And the first time you speak, please spell your name, first and last name, for the record.

I also want to thank Hydrostor for reminding us

to take care of our well-being today in light of the announced heat wave here in Mojave. They have wonderfully provided water and other hydration solutions over to the south side of the room. Please help yourself, stay healthy, and if anyone is feeling ill or faint, please ask for assistance earlier rather than later.

And so now I would like to hand it back to Commissioner McAllister for another brief announcement.

COMMISSIONER MCALLISTER: Okay. Well, thank you, Hearing Officer Webster-Hawkins. I'd just like all of us to take a moment to remember several people, actually, and acknowledge their role in not only all of the ways that we personally have interacted with them, our agencies have interacted with them, but for their contributions just to making the world a better place, more generally.

And first is Daryl Harrison, who I want to just acknowledge, on the Applicant team, who passed away tragically, and just want to send our deepest condolences to his friends and family and loved ones who are suffering.

Second, I want to acknowledge the passing on July 14th of Bob Weisenmiller, who was former Chair of the Energy Commission, all-around superstar in the energy field through half a century, at the origin of the Energy Commission pretty much when it first was formed 50 years ago, worked with Governor Brown in all of his iterations

and transformations across, you know, more than, way more than half a century of California politics and development and advancement.

I personally am just really, really saddened to lose Bob, and I know many of you knew him and worked with him through the years. We are actually going to dedicate the CEC's 50th anniversary celebration later this year to Bob, so I encourage everyone to come to that or tune into that.

Andrew Meredith, the former head of the State
Building Trades, also representing a huge number of
Californians that have contributed to our economic and just
physical well-being and our economic well-being. So I want
to acknowledge his passing as well, really a titan in the
labor movement.

And then finally, just given the site where we find ourselves today, we wanted to acknowledge just all the veterans through the years living and passed along. You know, the military is sort of a bedrock of what it means to be an American and to defend our democracy. And I think, you know, regardless of sort of the political winds and how they swing, you know, state, local, federal, we all, you know, owe a huge debt of gratitude to our veterans who served us, and acknowledging just the role of the Air Force here and all the branches of military.

So for all of those people, Americans and 1 2 Californians, Mr. Harrison, Dr. Weisenmiller, Mr. Meredith, 3 and all our veterans, compatriots, I wanted to have a moment of silence. So if we will, thank you very much. 4 5 (A moment of silence is observed.) COMMISSIONER MCALLISTER: Okay. Thank you. 6 7 HEARING OFFICER WEBSTER-HAWKINS: Thank you very 8 much, Commissioner McAllister. 9 I also want to acknowledge that our Public Advisor's Office is represented by Ryan Young, Deputy 10 11 Public Advisor, and he is here to ensure that everyone in 12 attendance can participate effectively in this Energy Commission event. 13 14 So now I'm going to turn to the Applicant to 15 please introduce the members of your team. Please state 16 your names, titles, and organizational affiliation. 17 MR. HILDEBRAND: Good morning. My name is Curt Hildebrand, C-U-R-T H-I-L-D-E-B-R-A-N-D. I'm Senior Vice 18 19 President with Hydrostor. And I will pass the mic to 20 introduce the rest of our team. MR. HARRIS: Good morning. My name is Jeff 21 22 Harris, J-E-F-F, Harris, H-A-R-R-I-S. I haven't done that for a while. Glad to be here. I'm outside counsel to the 23 24 project.

MS. NEUMYER: Good morning. My name is Samantha

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1 Neumeyer, S-A-M-A-N-T-H-A N-E-U-M-Y-E-R, with the Climate 2 Edge Law Firm and outside counsel on behalf of the 3 Applicant. 4 MS. LEES: Good morning. My name is Laurel Lees. 5 That's L-A-U-R-E-L L-E-E-S. I'm the Senior Director of 6 Permitting with the Applicant. 7 HEARING OFFICER WEBSTER-HAWKINS: Thank you. 8 So now I will invite the Energy Commission Staff 9 to introduce themselves, including any members of the team 10 that might be appearing remotely. 11 MR. BABULA: Thank you. Hi, this is Jared 12 Babula, Senior Attorney. And the Legal Team today is Erika 13 Giorgi, Senior Attorney, and Mariah Ponce, Attorney. I'm 14 also with Eric Knight, Manager, Environmental Manager of 15 the Siting, Transmission, and Environmental Protection Division. We have a number of other folks who will be on 16 17 the Zoom call and/or in the room, and they can introduce 18 themselves when their panels come up. 19 Thank you. 20 HEARING OFFICER WEBSTER-HAWKINS: Thank you. 21 And turning now to the Intervenor Center for 22 Biological Diversity. 23 MS. GRAVES: Good morning. My name is Zeynep 24 Graves, Z-E-Y-N-E-P G-R-A-V-E-S, and I'm counsel for 25 Intervenor Center for Biological Diversity. I'm joined

online by my colleague Ileene Anderson, Senior Scientist and California Desert Director for the Center for Biological Diversity.

HEARING OFFICER WEBSTER-HAWKINS: Thank you very much.

So now that we have introduced all the parties to this proceeding, I would like to take the opportunity to recognize representatives of state and local governments and organizations, as well as California Native American tribes, and other public officials. If each of you are willing and could approach the witness panel and introduce yourselves, we'll make sure that a microphone is provided for you.

14 Thank you, Julie.

MS. OVIATT: Thank you very much. I'm Lorelei Oviatt. I'm the Director of Kern County Planning and Natural Resources here on behalf of the Kern County Board of Supervisors. Thank you. It's L-O-R-E-L-E-I O-V, as in victory, -I-A-T-T.

Thank you.

21 HEARING OFFICER WEBSTER-HAWKINS: Thank you.

22 That's great.

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MR. POHLMAN: Good morning. I'm Jeremy Pohlman,

J-E-R-E-M-Y P-O-H-L-M-A-N, and I'm a Senior Environmental

Scientist Supervisor with the California Department of Fish

1	and Wildlife, and look forward to being here today.
2	Thanks.
3	HEARING OFFICER WEBSTER-HAWKINS: Thank you.
4	MS. GERMINARIO: Good morning. My name is Lena
5	Germinario, L-E-N-A G-E-R-M-I-N-A-R-I-O, and I'm an
6	attorney with the California Department of Fish and
7	Wildlife.
8	Thank you.
9	MR. KLIEWER: Good morning. My name is Derek
10	Kliewer, D-E-R-E-K K-L-I-E-W-E-R, and I'm also an attorney
11	with California Department of Fish and Wildlife.
12	HEARING OFFICER WEBSTER-HAWKINS: Thank you.
13	Turning to Zoom, Ryan, are you able to see if
14	there's anyone raising their hand?
15	MR. YOUNG: Thank you.
16	If members of the government or tribal government
17	would like to introduce themselves at this time, please
18	raise your hand using the open-palm icon on the Zoom
19	platform.
20	Hearing Officer, I'm seeing none in the Zoom.
21	Back to you.
22	HEARING OFFICER WEBSTER-HAWKINS: Is your
23	microphone on?
24	MR. YOUNG: Yes.
25	HEARING OFFICER WEBSTER-HAWKINS: Can people hear

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    the Deputy Public Advisor when he speaks? Wonderful.
 2
    Okay, great.
 3
              MR. HARRIS: Hearing Officer, it's Jeff Harris
 4
    over here. I thought I saw a hand up from the East Kern
 5
    ACPD, the Air Pollution Control District. It's on the
 6
    screen.
 7
              MR. YOUNG: Oh, it doesn't turn.
              HEARING OFFICER WEBSTER-HAWKINS: So I'm hearing
 8
9
    that there may be a representative online from the Eastern
10
    Kern's Air Pollution Control.
11
              COMMISSIONER MCALLISTER: Hearing Officer, it's
12
    showing up on the screen up here behind you in the --
13
    Miquel Sandoval.
14
              HEARING OFFICER WEBSTER-HAWKINS: Yes, he is
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    showing up as having a raised hand. Can you --
16
              MR. YOUNG: Miguel Sandoval, we're going to
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    unmute your line. Your line is unmuted. Please introduce
18
    yourself.
19
              MR. SANDOVAL: Can you guys hear me okay?
20
              HEARING OFFICER WEBSTER-HAWKINS: Yes, thank you.
21
              MR. SANDOVAL: Oh, good morning, everybody,
22
    Miguel Sandoval, M-I-G-U-E-L, Sandoval, S-A-N-D-O-V, as in
23
    Victory, -A-L, Air Quality Engineer, Eastern Kern Air
24
    Pollution Control District.
25
              HEARING OFFICER WEBSTER-HAWKINS:
                                                 Thank you.
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So certainly not least, I want to thank the team that has worked tirelessly to make this event happen. As you've been introduced to Mr. Ryan Young, he's with us today from the Office of the Public Advisor, Energy, Equity, and Tribal Affairs at the CEC.

The Legal Support Team, Blanca Camberos and Elizabeth Lopez from the Chief Counsel's Office. Thank you for all of your support.

Kris Peter from our IT Division, who is responsible for transforming this space into, to the technological wonder that we're working with today.

Elise Hicks is our Court Reporter. Thank you.

And also, Aaron Vargas Rivas and Giselle Franco are our Spanish Interpreters.

So now we are showing the proposed detailed schedule as published in the Committee's order after the prehearing conference. It is shown as a courtesy for everyone joining today. As stated in the order, these times are estimates. Indeed, the times allotted to each of the substantive panels may be generous. All parties, witnesses, and agency representatives are asked to be ready to join as soon as the previous topic or item of business is completed.

I know the parties have had a chance to see this in the order filed earlier this week. Do we have any

1 questions about the schedule? 2 Briefly, Applicant, do you have any questions 3 about the schedule? 4 MR. HARRIS: Yeah, we have no questions on the, 5 on the schedule. We do have some comments and corrections 6 that I mentioned we'll make at the appropriate time. 7 HEARING OFFICER WEBSTER-HAWKINS: Okay. 8 you. 9 Staff? 10 MR. BABULA: No questions on the schedule. 11 HEARING OFFICER WEBSTER-HAWKINS: Thank you. 12 And Intervenor? 13 MS. GRAVES: No questions on the schedule. 14 HEARING OFFICER WEBSTER-HAWKINS: Thank you. 15 COMMISSIONER MCALLISTER: One request. Could we 16 turn up the volume of that mic a little bit? 17 HEARING OFFICER WEBSTER-HAWKINS: Right. 18 COMMISSIONER MCALLISTER: We're having a hard 19 time hearing. 20 HEARING OFFICER WEBSTER-HAWKINS: And do, if you 21 can, when you're using the mic, use it like you're singing 22 right into the mic. Thank you. 23 Okay, what I'd like to do right now is ask Mr. 24 Young from the Public Advisor's Office to describe to 25 everyone in the room and on zoom, how they can sign up for

public comment periods today.

So to you, Mr. Young.

MR. YOUNG: Good morning. And thank you for joining us today. Again, I'm Ryan Young, The Energy Commission's Deputy Public Advisor. I wanted to mention at the beginning of our time here today, a few instructions for later in the day, which I will also repeat at that time.

We ask everyone that would like to make a comment to turn in their blue card as soon as possible to the Public Advisor's table, it looks like this and I've placed stacks of them around the room. If you represent a governmental entity, local state, federal legislative or California native American tribe, please indicate that on your blue card.

The public comment period will be an opportunity for attendees to give comments regarding these proceedings. If you want to make remarks on behalf of a government entity or Native American Tribe, your comment will be taken first and without a timer. Otherwise comments are limited to three minutes and one speaker for organization.

For those of you online, you're going to use the raise-hand feature that looks like an open palm to alert us that you'd like to make comment. For those of you joining by phone, you're going to press star nine to raise your

hand and then press star six to mute and unmute.

Again, I'll be providing a reminder about these instructions at the appropriate time, but for now, back to you Hearing Officer.

HEARING OFFICER WEBSTER-HAWKINS: Thank you.

So now to set the stage for today's hearing, I will briefly describe the application seeking certification of the Willow Rock Energy Storage Center.

On December 1st, 2021, Gen A-CAES LLC filed its original application to construct and operate the Willow Rock Energy Storage Center. The project Applicant started filing documents for a supplemental AFC on March 1st, 2024, which reconfigured and relocated the proposed project.

As proposed in the supplemental AFC, the project would be located on an 88.6-acre portion of an approximately 112-acre parcel North of Dawn Road between State Route 14 and Sierra Highway within unincorporated Kern County, approximately four miles North of Rosamond, California.

Willow Rock would be a nominal 520 megawatt gross, or 500 megawatt net, and 4,160 megawatt hour gross, or 4,000 megawatt hour net, compressed air energy storage facility using Hydrostor's A-CAES technology. Key features of the system include a 577-acre-foot hydrostatically compensating surface reservoir with liner and technology

and related accessories, eight electric motor driven air compressors configured in four trains, four air powered turbine generators with 100 foot tall air vent stacks, thermal storage systems including six 100-foot-tall hot water spherical storage tanks, a 21.5-acre interlocking shape floating cover over the reservoir, a 900,000 cubic yard underground compressed air storage cavern and all associated operational and safety equipment and piping.

Excavated rock from the cavern may be stored on site in an architectural berm or may be trucked off site to a rock processing facility.

Energy stored at Willow Rock would be delivered to the Southern California Edison Whirlwind Substation located Southwest of the site at the intersection of 170th Street West and Rosamond Boulevard via a new approximately 19-mile, 230-kilovolt generation, or gen-tie. The application describes a preferred route for the gen-tie line with up to eight options depending on feasibility of certain segments.

The Willow Rock Energy Storage Center is planned to operate on a 24-hour basis, 365 days a year with an approximately 50-year lifespan.

And so now to provide the status of this proceeding as noted, Gen A-CAES LLC filed its original application on December 1st, 2021. And after requesting a

temporary suspension of the proceeding, the Applicant filed a supplemental application beginning on March 1st, 2024, which was verified as complete by the Energy Commission's executive director on July 16th, 2024.

After a discovery phase, CEC Staff filed its

Preliminary Staff Assessment on April 29th, 2025. Staff

conducted a public workshop on the Preliminary Staff

Assessment on June 5th, 2025 here in Mojave, and accepted

public comment on the Preliminary Staff Assessment through

June 16th of 2025.

On July 16th, 2025 Staff filed its Final Staff
Assessment or FSA. Staff has identified its FSA as its
formal opening testimony for the evidentiary hearing. On

July 17th, 2025 the Committee filed notice of the prehearing conference and this evidentiary hearing. On August 15th, the Committee held its prehearing conference. And now, at this evidentiary hearing, the Committee will formally accept evidence and testimony from the Applicant and parties into the formal hearing record.

After the evidentiary hearing, the Committee will take the hearing record and use it to write a report called the Presiding Member's Proposed Decision, which is a recommendation to the full five-member Commission about whether to certify or reject the proposed project and what Conditions of Certification might be appropriate for the

construction and operation of the power plant. This written document will contain the analysis and conclusions of the Committee that it has made about the factual and legal questions presented during the evidentiary hearings. The Committee will provide a 30-day public comment period on the proposed decision.

And then ultimately, the Energy Commission will review the presiding member's proposed decision and public comment, and then vote at a public business meeting on a final decision about whether to approve or deny the certification of the proposed project. If the Energy Commission grants an application for certification, the project Applicant may begin construction and operation of the power plant subject to the adopted Conditions of Certification, which can include mitigation measures and other requirements.

So as set forth in the July 17th notice, and as discussed at the prehearing conference, this evidentiary hearing is being conducted using an informal hearing procedure permitted by Government Code section 11445.10 and CEC Regulations section 1210.

The general order of presentation for each task or panel today will be as follows: the Committee, the Applicant, the Staff, and then the Center for Biological Diversity. The Committee will consider allowing a further

round of questions if a party wants to rebut something or clarify something that was raised for the first time after the witnesses have testified. And then the Committee may ask final questions.

When we call witnesses or convene a panel, we will convene all of the witnesses on a single topic or subtopic together and swear them in together, calling them up to the tables collectively. And then we will invite any agency representative to join the group and also be available for questions from the Committee.

Regarding direct examination, we will deem all parties opening and reply testimony as their direct examination if admitted into evidence. There's no need to discuss experts resumes if we have them in writing and if no party objects to any witness as an expert. When witnesses testify, again, please have them identify themselves by their name, title, and employer, spelling their name their first time that they speak.

If any party has an objection to a witness's qualifications, please be prepared to state the objection and the basis. Any objections will be decided today during the hearing or taken under submission.

In the informal procedure, instead of back and forth questioning for direct examination, we have asked that the experts for each party prepare an opening

statement. Counsel for the parties will have a chance to ask questions of their own witnesses, along with the other witnesses, after the Committee leads the questions of the panel members.

As discussed at the prehearing conference, the agency representatives are appearing at the invitation of the Committee to provide information about their agency's responsibilities and review of this project under their subject matter expertise. They are not here to testify nor to be cross-examined by the parties.

The Committee and Hearing Officer will lead all questions posed to our sister agencies. If Counsel for any party has an informational question of an agency representative, please frame the question to the Committee or Hearing Officer, and then we will reframe the question if appropriate to the agency representative.

As set forth in the July 17th notice, and as discussed at the prehearing conference, you may only use a document that has been previously identified as an exhibit when questioning a witness.

If you're going to ask a witness questions about an exhibit, before you start, please let us know which exhibit number and page number if appropriate, so we can put it on the screen. When asking your questions, please start by identifying the document by exhibit number and

identify the specific page that you will be referencing.

And during that time, please give us time for support Staff to bring up the exhibits and make sure it's in view for everyone in the proceeding before commencing with your questioning.

If anyone has an objection to a line of questioning, please allow the party representative to finish their question before making an objection. And allow each witness to finish answering before moving on to the next question.

For the benefit of the court reporter and the transcript, please remind your witnesses to identify themselves each time they speak and have only one witness speak at a time.

At the conclusion of testimony, we will allow the parties to make a closing statement of up to 10 minutes, starting with Staff, then Center for Biological Diversity, and finally the Applicant.

So next we're going to move to the motions on exhibits. I'm going to ask Ms. Lopez if she can please display the exhibit list thus far?

This is the beginning of it. It's rather lengthy. Ms. Lopez is scrolling through it for the benefit of everybody in the room, and the parties and the public have access to see this list on their device as well.

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So first, as provided here on this list,
 1
 2
    Applicant identified Exhibits 1000 through 1323, skipping
 3
    1049.
 4
              Ms. Neumyer or Mr. Harris, do you have a motion
 5
    regarding your exhibits?
 6
              MR. HARRIS: I do, but I want to ask a question
 7
    first.
 8
              We have one additional exhibit, which was the
9
    resume of Mr. Mohanty, which would be next in order at
10
    number 1324. That document has been pre-filed. There's a
11
    TN -- sorry, just making sure -- there's a TN number
12
    associated with that, if my screen then saves, it will tell
13
    me.
14
              HEARING OFFICER WEBSTER-HAWKINS: Sir, can you
15
    please provide the TN number?
16
              MR. HARRIS: Correct. Yeah, 265694.
17
              COMMISSIONER MCALLISTER: You submitted that to
18
    the record earlier this week as well, right?
19
              MR. HARRIS: Correct. It has been docketed and
20
    assigned the TN number.
21
              COMMISSIONER MCALLISTER: Great.
                                                 Thank you.
22
              HEARING OFFICER WEBSTER-HAWKINS:
                                                 Correct.
23
              MR. HARRIS: Thank you.
              HEARING OFFICER WEBSTER-HAWKINS: So before we go
24
25
    to a motion regarding all of your exhibits, I want to ask
```

1	the parties if there's any objection to the Applicant
2	identifying TN265694 as Exhibit 1324.
3	Staff?
4	MR. BABULA: No objection.
5	HEARING OFFICER WEBSTER-HAWKINS: Thank you.
6	Intervenor?
7	MS. GRAVES: No objection.
8	HEARING OFFICER WEBSTER-HAWKINS: Thank you.
9	So with that, we will identify TN265694 as
10	Exhibit 1324.
11	(Applicant Exhibit 1324 is marked.)
12	HEARING OFFICER WEBSTER-HAWKINS: Having taken
13	care of that, do you have a motion for all of your
14	exhibits, Mr. Harris?
15	MR. HARRIS: Hey, we're being very good about
16	saving battery here. I do have a motion. I'd like to move
17	in the exhibits you've identified plus the additional
18	exhibit today.
19	HEARING OFFICER WEBSTER-HAWKINS: Thank you.
20	Again, Staff, do you have any objections?
21	MR. BABULA: No objections.
22	HEARING OFFICER WEBSTER-HAWKINS: Thank you.
23	Intervenor?
24	MS. GRAVES: No objections.
25	HEARING OFFICER WEBSTER-HAWKINS: Thank you all.

And so with that, we will admit Applicant's 1 2 Exhibits 1000 through 1324, skipping 1049, into evidence. 3 (Applicant Exhibits 1000 through 1048 and 1050 through 4 1324 are admitted.) 5 HEARING OFFICER WEBSTER-HAWKINS: So next, Staff identified Exhibits 2000 and 2001. And Mr. Babula, Ms. 6 7 Giorgi, before I ask for a motion, I'd like to also clarify 8 your evidence as well. 9 On August 6th, Staff submitted rebuttal testimony. And in that written testimony, it references 10 11 technical memorandum regarding CEC Willow Rock measure 12 results at NSA-7. It's docketed at TN265264. However, the 13 technical memorandum itself was not identified in your 14 initial exhibit list. 15 Additionally, this week you filed supplemental 16 testimony and edits to select Conditions of Certification, 17 TN265687. Do you intend to identify these exhibits and move them into evidence? 18 19 MR. BABULA: Yeah, let's -- so for the technical 20 memorandum, that could be -- so the FSA is 2000 --21 HEARING OFFICER WEBSTER-HAWKINS: 22 MR. BABULA: -- Rebuttal Testimony, 2001, 23 Technical Memorandum, we'll make that 2002. 24 HEARING OFFICER WEBSTER-HAWKINS: Mm-hmm. 25 MR. BABULA: And then the Staff Supplemental

1 Testimony and Edits to Select Conditions of Certification, 2 which is TN265687, can be Exhibit 2003. 3 HEARING OFFICER WEBSTER-HAWKINS: Thank you. 4 MR. BABULA: And so I'd make a motion to move all 5 those into the record. HEARING OFFICER WEBSTER-HAWKINS: First, we'll 6 7 ask if there's any objections to identifying them as 8 exhibits from the other parties, the Applicant, do you have 9 any objection? 10 MR. HARRIS: No objection to the identification. 11 We obviously reserve the right to comment on the substance 12 of the edits. 13 HEARING OFFICER WEBSTER-HAWKINS: Yes. Yes. 14 MR. HARRIS: Okay. Thank you. Yes, no 15 objection. 16 HEARING OFFICER WEBSTER-HAWKINS: And Intervenor? 17 MS. GRAVES: No objection. 18 HEARING OFFICER WEBSTER-HAWKINS: Okay. And then 19 thank you for that. They will be identified as such, as 20 265264 will be Exhibit 2002, 265687 will be Exhibit 2003. (Staff Exhibits 2002 and 2003 are marked.) 21 22 HEARING OFFICER WEBSTER-HAWKINS: I also wanted 23 to ask Staff about the status of the single compendium of 24 Conditions of Certification, which you graciously docketed 25 per the Committee's request at TN265702. Did you have an

1 opinion about whether that should also be identified as an 2 exhibit and moved into evidence, or is that more of a 3 reference for the parties? 4 MR. BABULA: That was more of a reference because 5 it's still in flux. And I think there's potentially some 6 changes that will come out of today. 7 HEARING OFFICER WEBSTER-HAWKINS: Let me ask, are 8 there any changes in that document which are not reflected 9 in your supplemental CoCs that we just identified as an 10 exhibit? MR. BABULA: It should be the same. It's a long 11 12 document and --13 HEARING OFFICER WEBSTER-HAWKINS: Okay. 14 MR. BABULA: -- there's a lot. 15 HEARING OFFICER WEBSTER-HAWKINS: Right. Okay. 16 MR. BABULA: But we tried to make sure they 17 synced up. 18 HEARING OFFICER WEBSTER-HAWKINS: At this point, 19 we will not identify the compendium as an exhibit. If you 20 feel the need to through the proceeding, please let us 21 know. 22 Yes, so at the end of today, when we talk about, 23 briefing schedules, we'll also talk about any supplemental 24 filings into the record, like a final compendium, you know, 25 if appropriate.

1 MR. BABULA: That will work. And generally what 2 happens is once we get agreement and finalized, Staff will 3 provide the Committee with a word version so you can 4 incorporate that into your decision. 5 HEARING OFFICER WEBSTER-HAWKINS: Thank you so much. 6 7 So with that, do you have a motion about moving 8 the exhibits you've identified into the record? 9 MR. BABULA: Yes. I move to put the FSA, Exhibit 2000, the Rebuttal Testimony, Exhibit 2001, that Technical 10 11 Report, 2002, and this Staff's Supplemental Testimony and 12 Edits to Select Conditions as 2003. 13 HEARING OFFICER WEBSTER-HAWKINS: Thank you. 14 And are there any objections to moving those into 15 the evidence, Applicant? 16 MR. HARRIS: No objections. HEARING OFFICER WEBSTER-HAWKINS: 17 Thank you. 18 Intervenor? 19 MS. GRAVES: No objections. 20 HEARING OFFICER WEBSTER-HAWKINS: Thank you. 21 So with that, so moved. Those exhibits are all 22 now admitted into the record. 23 (Staff Exhibits 2000 through 2003 are admitted.) 24 HEARING OFFICER WEBSTER-HAWKINS: So turning to 25 the Center for Biological Diversity, you identified

Exhibits 4000 and 4001. And Ms. Graves, before I ask for a motion to move your exhibits into evidence, I would like to clarify your evidence.

In your opening testimony, Ms. Anderson identifies and lists as references the California native plant society, Yucca Brevifolia Woodland Alliance, the Joshua tree woodland docketed as 265164.

You also referenced and docketed the California Department of Fish and Wildlife, California Natural Community List, and that's docketed at TN265165.

And you also referenced and docketed the California Department of Fish and Wildlife, Western Joshua Tree Conservation Plan, Volume 1, the June 2025 version, and that's docketed at TN265166.

However, none of these documents were identified as exhibits separate from Ms. Anderson's testimony. And that was provided in the instructions in the hearing notice to make sure that all documents relied upon were also identified as exhibits.

What was your intention in referencing those documents and would you have an interest in identifying them as exhibits?

MS. GRAVES: Yeah, I think that the matters that Ms. Anderson opined on that were referenced, most if not all of that subject matter are covered by other materials

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1
    that are already in evidence, particularly the FSA.
              HEARING OFFICER WEBSTER-HAWKINS: Mm-hmm.
 2
 3
              MS. GRAVES: So I don't think it's critical to
 4
    separately move those into evidence.
 5
              HEARING OFFICER WEBSTER-HAWKINS: Mm-hmm.
 6
              MS. GRAVES: That said, for a clean record, and
 7
    if there's no objections from the other parties, maybe we
    will make a motion to identify the four documents, so
 8
9
    starting with TN265164, TN265165, and TN265166 -- sorry,
10
    three documents --
11
              HEARING OFFICER WEBSTER-HAWKINS:
                                                 Mm-hmm.
12
              MS. GRAVES: -- and mark those as exhibits
13
    starting with number 4002 --
14
              HEARING OFFICER WEBSTER-HAWKINS: Yes.
                                                       Yeah.
15
              MS. GRAVES: -- through, I guess, 4.
16
              HEARING OFFICER WEBSTER-HAWKINS: Thank you for
17
    that motion.
18
              Are there any objections?
              Applicant, do you have any objections?
19
20
              MR. HARRIS: No objection, but clarification.
21
    think those are all agency documents; is that correct?
22
    is the California Native Plant Society?
              MS. GRAVES: Correct. The California Native
23
24
    Plant Society Alliance document wouldn't be an agency
25
    record.
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1	MR. HARRIS: So I assume we're moving those in
2	the numbers and not for the truth of the matter asserted in
3	there
4	HEARING OFFICER WEBSTER-HAWKINS: Right.
5	MR. HARRIS: but just to have them for
6	reference. And on that basis, we'd have no objection.
7	HEARING OFFICER WEBSTER-HAWKINS: Thank you.
8	Staff?
9	MR. BABULA: I concur with Mr. Harris. Those are
10	references and we can move them in for purposes of being
11	references. Thank you.
12	HEARING OFFICER WEBSTER-HAWKINS: Thank you very
13	much.
14	So, so moved as enumerated by Ms. Graves.
15	(Intervenor Exhibits 4002 through 4004 are marked.)
16	HEARING OFFICER WEBSTER-HAWKINS: So having
17	identified those documents as exhibits as well for the
18	Intervenor, do you have a motion with regards to moving
19	your identified exhibits into the record?
20	MS. GRAVES: Yes, we'd like to move to enter into
21	evidence Exhibits 4000 through 4004.
22	HEARING OFFICER WEBSTER-HAWKINS: Thank you.
23	Applicant, do you have any objections to that
24	motion?
25	MR. HARRIS: A clarifying question.

1	HEARING OFFICER WEBSTER-HAWKINS: Yes.
2	MR. HARRIS: I thought there were five, actually.
3	I thought there was an opening and a rebuttal testimony and
4	then three references. So it's five?
5	HEARING OFFICER WEBSTER-HAWKINS: That's correct.
6	MR. HARRIS: Okay. Maybe I just can't
7	HEARING OFFICER WEBSTER-HAWKINS: It would be
8	4000 through 4004.
9	MR. HARRIS: Okay. Great. All right. Thank
10	you. I appreciate the clarification there. I have no
11	objections on them.
12	HEARING OFFICER WEBSTER-HAWKINS: Thank you.
13	Staff?
14	MR. BABULA: No objections.
15	HEARING OFFICER WEBSTER-HAWKINS: Great. Thank
16	you.
17	(Intervenor Exhibits 4000 through 4004 are admitted.)
18	HEARING OFFICER WEBSTER-HAWKINS: Wonderful, we
19	have moved all of the known documents and exhibits into the
20	record.
21	And with that we will turn to public comment.
22	Mr. Young, will you please facilitate?
23	MR. YOUNG: Thank you.
24	The CEC now welcomes public comment. As a
25	reminder, all comments will become part of the public

record.

Now for the instructions. Now, this public comment period, again, is an opportunity for attendees to give comments regarding this proceeding. If you want to make comments on behalf of a California Native American tribe or government entity, your comment will be taken first without a timer. Otherwise, comments are limited to three minutes and one speaker per organization. We'll show a timer on the screen and we'll alert you when your time is up. All comments will become part of the public record.

Again, we will start with commenters joining us in person and then transition to online and phone attendees. So if you're here at the on location please fill out and turn in a blue card now to myself. (Speaking Spanish.)

I would like to call Rick Webb. Please approach the witness table here.

If someone could provide him a microphone?

Rick, please approach the podium and spell your name for the record. You're invited to also share your affiliation and position on the project if any, and then you may.

MR. WEBB: Thank you. Good morning. My name is Rick Webb, Rick, R-I-C-K, last name is Webb, W-E-B-B. Good morning all.

Thank you folks for coming down. The weather, can't do much about that but enjoy it as you can.

I come here. I'm a director at the Rosamond Community Services District. I sit as the director there.

What I'd like to say about Hydrostor from the day they bought the project to our attention they had one site they had identified and it didn't meet their particular needs, and they changed to the other site but they never miss a step in keeping us informed. Transparency is an understatement for this particular company. I made some notes. I may not get through all of them but the company's been good by the communities as a whole. No community in Rosamond, Cal City, Mojave has not been touched by the warmth and the professionalism of them.

The thing I'm looking forward to with this here, they're going to bring jobs to the community. The small businesses benefit from it. But besides the small businesses, I think with Hydrostor being in this community, she mentioned 50 years, that tells other companies permanency. That brings other activity, other things.

Our community is growing. We have a lot of homes coming and whatnot, and I support it tenfold, the growth. Small businesses are going to get the benefits of it, but I think it's going to spur excitement with other businesses and other projects to come here.

In the 30 years I've been here, people have come, gone, they've made promises, but Hydrostor has literally left their promises at the table, be it with helping with projects and the fact they've kept us involved with - I mean informed. And I just think it's a good way for the community, the region -- this is a regional project. This is not a community project, this is a regional project. And with our energies being what they are daily on my phone, I get -- we could get a brownout, brownouts, whatnot or whatever. This is just another way to assure.

And speaking as a director of the Rosamond

Community Services District, we submitted a letter of

support to the project, our entire board. And as a

resident myself, and just as a person that's seen this

region get promises that weren't fulfilled, I think

Hydrostor has more than fulfilled their promises as far as

bringing a project that's viable. And the best part about

it, I have grandchildren, it's clean. It's not dirty.

It's something that's clean.

So thank you very much for giving me the opportunity, and I support Hydrostor and I look forward to you folks, you know, looking at the entire project and giving them your support also.

Thank you.

COMMISSIONER MCALLISTER: Thanks for being here

and providing that linkage to the local community. It's really important. Thank you.

MR. WEBB: Yeah, and they're important -- excuse me. And they're important to the local community. Their first rate.

Thank you folks.

MR. YOUNG: Thank you. I'm now going to ask Joel Mackay to approach. Please spell your name for the records.

MR. MACKAY: First name Joel, J-O-E-L, last name Mackay, M-A-C-K-A-Y. I am on the Rosamond Municipal Advisory Council.

I've been in Antelope Valley over 50 years, graduated school here in Rosamond, long-time community member. From the inception, Curt and his team, like Rick stated, transparency, second to none. They've shown up at our meetings, kept us informed, endeared themselves in the community. They're part of the community. Our Christmas events, like Rick said, Cal City, Mojave, the support they've shown those communities, our communities, donating so children can get toys and clothes and stuff like that, anything the community needs, they've been there for the community.

We support. There's overwhelming support in our community. Not only the benefits from the county of them

are going to be providing fire equipment that's needed out here in east for this project, the tax dollars that's going to come out here to the county, the catalyst, we're hoping that with them being out here, them showing with their project out here, it's going to bring other projects out here and other businesses out here to east current.

I support it. I think overwhelming community support and Rosamond supports the project. And we're hoping that you guys will see the need and the benefits to our community and vote to allow this project to continue.

COMMISSIONER MCALLISTER: Thanks for being here and for all your engagement.

MR. YOUNG: Thank you.

I'd next like to welcome Lorelei Oviatt.

MS. OVIATT: Thank you. I am Lorelei Oviatt,
L-O-R-E-L-E-I O-V-I-A-T-T, Director of Kern County Planning
and Natural Resources. I'm here on behalf of the Kern
County Board of Supervisors. Thank you for this
opportunity.

First, we appreciate that the conditions that the Board of Supervisors had provided in the original letter as the conditional support, those conditions have been included in the staff assessment. And at this time, I'm authorized to tell you that the Kern County Board of Supervisors supports this project and would like to see

your -- the Commission certify this project.

Second, we would, however, like to comment on the issue that you have on this evidentiary hearing today regarding the habitat conservation mitigation ratios. I personally have led the team that has permitted 170,000 acres of solar and wind with CDFW, all done with Environmental Impact Reports. We have never seen this calculation done this way. We usually have an umbrella species and then other species are under it such that the calculations are done that way for how much land. I'm being simplistic. There are biologists here and CDFW and attorneys that are going to get into the details.

Kern County's concern is we are processing 6,000 megawatts of solar projects right now, that's over 42,000 acres, along with battery storage of 7,000 megawatts. If we used this methodology, there would not be enough habitat land to mitigate. And we believe it's just an error. We have great confidence in CDFW and the work that they do, but somehow this particular CEC process appears to have gotten some sort of complicated conversation about how much land.

So Kern County, because we are interested in not creating this precedent, we appreciate that you're going to dig into this and we ask that you thoughtfully work your way through it. The Applicant is not always right, and

CDFW has a very, very big workload. So would just -- we just appreciate that you're going to relook at this because we believe it would create a precedence if you adopt this methodology.

Lastly, we would like to express, Kern County would like to express its appreciation for the California Energy Commission and Governor Newsom's support of a Kern County economy. For many years, we're very proud that our last project put the City of Los Angeles at 60 percent renewable energy. That puts us at 70 percent of the renewable energy in California, it's produced in Kern County, and 80 percent of the lithium batteries are here and we do keep the lights on. But we also are proud that Governor Newsom is now working to support other aspects of our economy.

And we just really also appreciate that you came to the actual place where these things happen. You're welcome to come anytime. And I'd like to just make sure everybody knows that when you look out the door, you see the wind, the solar that's under -- there's probably 19,000 megawatts of projects, and this is what the California Energy Commission does.

Thank you so much.

COMMISSIONER MCALLISTER: Thanks, Ms. Oviatt, just for all your partnership, not just on this project but

across the board. You know, Kern County is kind of ground zero for our energy transition and we -- I mean, the governor knows that and I think we all appreciate that. So we don't just come down here when we need support from the Rules Committee to get confirmed. You know, we know what a great partner you and your colleagues at the county are, so thanks very much.

COMMISSIONER GALLARDO: And I'll just add really quickly that you've been a role model for other governments and we've also appreciated how you've been willing to share your insight, lessons learned, best practices, and all of your insight with other local governments as well, aside from the state. So, thank you, Lorelei.

MR. YOUNG: I'm now going to turn to those on Zoom. Governments and tribal commenters, please raise your hand using the raise-hand feature that looks like an open palm. For those of you joining by phone, press star nine to raise your hand and then press star six to mute and unmute.

So that concludes public comment for government and tribal commenters.

I'm now going to turn to other interested members of the public. Again, please let us know if you'd like to make a comment by submitting a blue card if you're in the room.

Neal Desai, press star six to mute and unmute.

You should be able to deliver your comment. Neal Desai?

MR. DESAI: I was raising my hand for the public or interested commenter, so I'll wait.

MR. YOUNG: Thank you. We'll return to public comments from the members of the public in just a moment.

So here in the room, I'd like to welcome Dr.

David Smith. Please approach and spell your name for the record. Okay, we can return to Mr. Smith.

Anthony Myers, please spell your name for the record and provide your comment. Thank you.

It looks like we may have one governmental

MR. MYERS: My name is Anthony Myers,

A-N-T-H-O-N-Y M-Y-E-R-S. I am the Co-founder of Safe Haven

Kids Leagues of California City, and Safe Haven Kids Lead

Community Resources of California, and I am speaking for

this amazing company, Amazing. Hydrostor has been a

sponsor of Safe Haven for the last two years, and we're

doing nothing but more work because of them. I truly thank

them. I truly appreciate them. Our organization

appreciates them, our Staff, and our community.

We came onboard with Hydrostor into their amazing family, helping out. They helped us out with the turkey giveaway, turkeys and ham. And a couple years ago, we

started off small, and since being with them, we have exceeded tremendously in helping families in need.

Our organization is basically, we help families in need. We're a non-profit organization based in California City, and we do just that with food insecurity, events, et cetera. Hydrostor has been a major sponsor on there. We just got through with our backpack giveaway, annual backpack giveaway that we did in California City for the East Kern community. And they came onboard with us. Never, when I talked to Curt, Laurel, Russell, Natalie, they never -- no, it's how can we exceed? How can we do more for this community? How can we push this through?

At our backpack giveaway, we gave out over 526 backpacks to that community with the help of Hydrostor, this amazing company. They came on, they suited up, they showed up like they always do. And I'm standing in that backpack giveaway, and I'm looking around at all these kids, and I'm looking at the Hydrostor booths among others, and I'm saying, wow, I mean, they're really putting this effort into our community, and they really want to help our community. Wow, this is crazy.

And I thought through this on this. They're just not helping this community. They're just not there just to give to the community. They were helping their future employees, the kids of our community, the future. They

were making sure they had all the school supplies to get to school, to get the education they need to become employees of this amazing company.

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And we thank them. Thank you. Thank you. We appreciate you so much.

And we've stepped up even more this year. We had a great conversation at the beginning of the year. They're sponsoring our turkey giveaway to help families in need with turkeys and hams and full food boxes. They want to exceed the numbers that we did last year. We were at 302 last year. They want higher. Our job at Safe Haven with our amazing team is to give them what they want, to continue to help and feed families and give back to the families of this community because it's important. They have allowed us into their amazing company, believe. into their amazing mission, and they have wrapped their arms around Safe Haven, and we are truly, truly grateful. Truly grateful.

I thank you all for your service. I thank this amazing company for being here in East Kern and representing our amazing communities, and we look forward to doing more and more work with you all.

Thank you. Give 'em hand, y'all. Give 'em hand.

COMMISSIONER MCALLISTER: Thanks for being here

today. I remember you from the last hearing we had down here, and just it's really great to see that continuity and that ongoing support, so appreciate your engagement.

COMMISSIONER GALLARDO: Yeah.

COMMISSIONER MCALLISTER: And all you do for your community. Yeah. Thank you.

COMMISSIONER GALLARDO: Yeah, I was going to say,

MR. YOUNG: Thank you.

community, so bravo.

I'd next like to invite George Hodgkinson to approach. Please spell your name for the record.

we need to give you a hand for all you're doing in the

MR. HODGKINSON: Good morning. I think it's still good morning. My name is George Hodgkinson. First name G-E-O-R-G-E. Last name H-O-D-G-K-I-N-S-O-N.

I reflect the same comments I've heard before from public comment, especially the last gentleman. He's been in a lot of the meetings.

At present, I'm President of Mojave Chamber of Commerce. I'm a secretary of a local Elks Lodge. I was 18 years on our local school board for Mojave in California City. Ten years, I served as a Commissioner for Parks and Recreation in Kern County. My work experience, 32 years, I worked in R&D at Rio Tinto, U.S. Borax.

I'm a lifetime member in Mojave. I remember the

first time at this location, used to be a swimming pool years ago operated by the military when there was a Marine base, and they tried to force me to jump off the end when I was six years old. I wouldn't go for it. And so I went down the other end, the shallow inn. But enough said.

Lifelong member of Mojave. Went to school from first grade to high school. Graduated way back in 1966. Attended four years of college. And from 1966 through '73, I worked for Chevron Oil, pump and gas in Mojave. And I remember the energy shortage problems we had in early '70s. And the Energy Commission is part of that; correct? That history.

When I got out of college, I majored in astrophysics, studying stars, solar energy, and the like. When I came back over the hill, come back to Mojave, Mojave had a little bit of a different meeting. The wind is blowing. Ah, renewable energy. But we didn't have any renewable energy programs back in 1970. We didn't have solar or wind. But the heat and the wind was always there. I remember in high school, battling the wind.

So I support anything to do with energy. I think we need to pull out the plug, go after all energy sources as we can, and invest from the government all the way down what we can do to discover new forms of energy or new ways to make our past energies more efficient.

And Hydrostor, as mentioned earlier, has been a great addition to our Chamber of Commerce. They participate in a lot of our charity events and has helped us out in innumerable ways and we really appreciate that.

So I support this energy project. I hope there's a wild card in any of the things we discuss going on. The aha moment, something else comes up related to this project, there could be things because of the work being done that will help our energy that we need in this country. Because AI is coming up. We're going to need all the energy we can get. And I do support this project. And I'd probably support just about any project that we would be involved with.

So that's all I have to say. And thanks very much.

COMMISSIONER MCALLISTER: Thank you for being here. And this is great. I feel like we're getting a snapshot of sort of the history of the community here and your role in context. So thanks for all your contributions to the community and to your support here.

MR. YOUNG: Thank you.

I would next like to welcome Richard Chapman.

MR. CHAPMAN: Good morning, Commissioners. My name is Richard Chapman, R-I-C-H-A-R-D C-H-A-P-M-A-N, the Presidency of the Kern Economic Development Corporation.

Our organization is 185 members strong, business, education and government working together to create boundless opportunities for business in Kern County.

And I'm sure as has been mentioned today, we are the energy capital of the West, obviously, solar, wind, battery storage, oil and gas, et cetera. And we are the renewable energy capital of the country in terms of county production.

We're very proud of being part of the energy evolution. What happens are these jobs create upward mobility. There are STEM jobs. We're actually one of the top regions for STEM opportunities. And our STEM jobs don't look like many other areas. We have high school, folks with high school degrees, community colleges and beyond that are offered the opportunity to move beyond where they're -- you know, where the past generations were.

mentioned, the energy evolution creates STEM jobs. And we're talking 700 construction jobs over four years, and then permanent jobs. What has maybe not been mentioned is the multiplier effect. Every job on that site is going to create new restaurant purchases, supplier, cluster-related service provider opportunities. So I think I saw one data point, \$500 million of economic activity, not just the capital investment, but the \$500 million infused into our

1 economy. And obviously, powering 400,000 homes. 2 Our litmus test for projects at Kern EDC, we have 3 three legs of the stool. Does it create jobs? Obviously, 4 this does. Does it create capital investment? We hear \$2 5 billion. But also tax revenue, public revenue. And this is basically fully assessed for property tax, no 6 7 exclusions. So these taxes are going to help build roads, So this is really critical as we look at 8 fund education. 9 working with Hydrostor, moving to the finish line, and 10 adding to our portfolio that I discussed earlier. 11 So Kern EDC strongly supports this project. And 12 we urge the California Energy Commission to approve this 13 critical economic development, really life-changing 14 project. 15 Thank you for your time and consideration. 16 COMMISSIONER MCALLISTER: Thanks for being here 17 for your comments. 18 MR. YOUNG: Thank you. 19 I'm now going to ask Drew Mercy to approach. 20 Please remember to spell your name for the record. 21 Hi, my name is Drew Mercy, D-R-E-W MR. MERCY: M-E-R-C-Y. I'm the Executive Director for the Antelope 22 23 Valley Economic Development & Growth Enterprise. 24 We're a regional economic development 25 organization covering the Antelope Valley, which is

southeast Kern County and northern Los Angeles County, the high desert portions of both of those counties. And we have about 500,000 residents throughout the area. And of those 500,000, about 100,000 commute every day down to L.A. or out to the greater Bakersfield area. So when we talk about developing local jobs here, every job is a green job because we're getting somebody off of that horrible commute. And these are some of the worst commutes consistently ranked nationally, up to two hours each way.

So as you can see, we're a beautiful high desert community. And a lot of folks would come and say, oh, well, you probably have trouble growing due to water. But due to a lot of water storage projects, water actually isn't our biggest challenge, it's electrification.

And as has been discussed, this is the renewable hub of much of the world in the technology being developed. When you look around, you see the windmills, the solar panels. We're expanding into hydrogen fuel development as well.

But the choke point we're facing as we work to meet California's renewable energy needs is storage.

Without the storage to capture that energy during the peak generation times and for use in off-peak times, it is limiting our ability to grow and create those local jobs to reduce congestion and pollution.

We respectfully request that the Energy Commission approve this project. As has been discussed, Hydrostor has been out here for a few years now. They've become great neighbors, not just investors. They are neighbors. They've gotten involved to support our community's youth, become a part of the business community. And this project will not only create those direct and indirect jobs, but allow us to grow, to create new jobs here locally. So on behalf of the businesses and residents of the Antelope Valley, we respectfully request you approve this project, and thank you. MR. YOUNG: Thank you. I'm now going to turn to the participants on Interested members of the public, please let us know if you'd like to make a comment so we can call on you. You're going to use the raise-hand feature that looks like an open palm. And for those of us joining us by phone, press star 9 to raise your hand and star 6 to mute and unmute. I'm first going to turn to Neal Desai. Neal, go ahead and unmute. MR. DESAI: All right. Thank you. Good morning, everyone. My name is Neal Desai, N-E-A-L D-E-S-A-I. I'm the Senior Pacific Regional Director for the National Parks

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Conservation Association. We submitted a letter to the docket yesterday expressing our strong support for the Willow Rock Energy Storage Center.

By background, we were founded in 1919 to serve as the independent voice for our national parks. And along with our over 33,000 members in California, we advocate from local and federal levels to communities toward safeguarding our national parks, which we have many amazing places in California, ranging from Muir Woods in Yosemite to National Historic places like Manzanar and Cesar Chavez.

I want to thank all the parties involved from the staff to the Applicant to the Intervenors for all their work in this process that has allowed us to get to this point. Our intersection with this matter is our involvement in state legislative and land use planning efforts regarding renewable energy policy in California. We focused a lot of our attention on long duration energy storage policy, which we have shaped through legislation. And that work has supported procurement decisions that have protected ratepayers and California's resources, like water and wildlife.

Willow Rock fits precisely within California's procurement needs for long-duration energy storage and through this process can be seen as a responsible long duration energy storage project. So we respectfully

request your swift certification on this project. 1 2 Thank you very much. 3 COMMISSIONER MCALLISTER: Thank you for your 4 comments, Mr. Desai. I appreciate that. 5 MR. YOUNG: Thank you. I would like to again invite those on Zoom to use 6 the raise-hand feature if you'd like to make a comment. 7 8 That concludes this first comment period. 9 would turn it back to Hearing Officer Webster-Hawkins. 10 HEARING OFFICER WEBSTER-HAWKINS: Thank you, Mr. 11 Young, and thank you everyone for your comments. 12 So now we move on to our first topic for which 13 we're going to be receiving testimony for the day. We will 14 ask the Eastern Kern Air Pollution Control District to 15 certify the Final Determination of Compliance, or FDOC. 16 Ms. Lopez, will you kindly display Exhibit 1057, 17 which was filed on May 14th, 2024? 18 As she is bringing that document up, I would like to call to the stand the Eastern Kern Air Pollution Control 19 20 District witness Mr. Miguel Sandoval, Air Quality Engineer. 21 I know that he is appearing via Zoom, so can we spotlight Mr. Sandoval on Zoom if he's on camera? Wonderful thank 22 23 you. 24 Welcome, Mr. Sandoval. Will you please state 25 your name for the record? Let's try again. We're opening

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1
    up your mic.
 2
              COMMISSIONER MCALLISTER: It seems like we might
 3
    be muted on one or the other end.
              HEARING OFFICER WEBSTER-HAWKINS: Mm-hmm.
 4
                                                          All
 5
    right.
              And have we been able to locate the Exhibit 1057?
 6
 7
    All right. And if you can scroll up at least to the face
    page you can hold it there? It's a somewhat lengthy
 8
9
    document.
10
              So, Mr. Sandoval, can we hear you, just a mic
11
    check? You may be muted on your end. Can you double check
12
    your microphone icon?
13
              MR. SANDOVAL: Is it better now? Can you guys
14
    hear me?
15
              HEARING OFFICER WEBSTER-HAWKINS:
                                                 Thank you.
16
    Wonderful. Wonderful. Okay, so if you could please
17
    restate your name for the record?
18
              MR. SANDOVAL: Yeah. Miguel Sandoval,
    M-I-G-U-E-L, Sandoval S-A-N-D-O-V, as in Victor, -A-L.
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20
              HEARING OFFICER WEBSTER-HAWKINS: And your
21
    official title, Mr. Sandoval?
              MR. SANDOVAL: Air Quality Engineer.
22
23
              HEARING OFFICER WEBSTER-HAWKINS: Thank you.
24
         (Miguel Sandoval is sworn.)
25
                         DIRECT EXAMINATION
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1 HEARING OFFICER WEBSTER-HAWKINS: Are you 2 testifying here today as an official representative of the 3 Eastern Kern Air Pollution Control District? 4 MR. SANDOVAL: I am. 5 HEARING OFFICE WEBSTER-HAWKINS: And you provided 6 your position with the district as an Air Quality Engineer. 7 Are you familiar with Exhibit 1057, which is 8 being shown on the screen right now? 9 MR. SANDOVAL: Yes, I am. 10 HEARING OFFICER WEBSTER-HAWKINS: Can you 11 describe it for us, please? 12 MR. SANDOVAL: Yeah, that is a letter to the 13 Applicant stating that their, you know, Final Determination 14 of Compliance application has been issued for their 15 project. 16 HEARING OFFICER WEBSTER-HAWKINS: And is there 17 anything attached to this letter? 18 Maybe, Ms. Lopez, you can scroll a little bit 19 into the next pages so Mr. Sandoval can see what's 20 attached? 21 Are you able to describe what these pages are? MR. SANDOVAL: Yeah, so that's our engineering 22 23 evaluation. So what we do is we review the air quality 24 analysis provided by the Applicant. And, you know, the 25 sections for review are, the first one would be best

available control technology. That should be somewhere down there if you keep scrolling. So ensure that the project is built with the best available control technology. The only long-term sources of emissions identified were four piston engines.

And then, so best available control technology, or BACT, in that case was to have an EPA-certified Tier 3 engines. The Applicant proposed Tier 4 engines, which satisfy our BACT requirements.

The other area for analysis was emissions offsets. We established that emissions offsets are not required for this project in accordance with our Local Rule 210.1, which exempts offsets, offset requirements for emergency engines.

The other area for analysis was health risk to offsite receptors. The Applicant provided a health risk assessment with modeling. So, that showed the calculated risk to offsite receptors is below any significant thresholds.

And then, lastly, what we did was we imposed operational conditions for those piston engines to ensure compliance with all our rules and regulations.

 $\label{thm:hearing} \mbox{ \ensuremath{\mbox{\sc HEARING}} OFFICER WEBSTER-HAWKINS: } \mbox{ \ensuremath{\mbox{\sc Thank}} you for that description.}$

So do you certify that the FDOC complies with the

1	rules and requirements of the control district?
2	MR. SANDOVAL: Yes, I do.
3	HEARING OFFICER WEBSTER-HAWKINS: And does this
4	exhibit establish that the Willow Rock project would comply
5	with the rules and requirements of the district?
6	MR. SANDOVAL: That's correct. That shows that
7	they would comply with all the rules and regulations.
8	HEARING OFFICER WEBSTER-HAWKINS: Thank you. So
9	there's no further questions from me.
10	Does the Committee have any questions for this
11	witness?
12	Seeing none, we'll turn to the Applicant. Do you
13	have any questions for this witness?
14	MR. HARRIS: No. No questions. Thank you.
15	HEARING OFFICER WEBSTER-HAWKINS: Thank you, Mr.
16	Harris.
17	HEARING OFFICER WEBSTER-HAWKINS: Staff?
18	MR. BABULA: No questions. Thanks.
19	HEARING OFFICER WEBSTER-HAWKINS: Thank you.
20	And Intervenor?
21	MS. GRAVES: No question.
22	HEARING OFFICER WEBSTER-HAWKINS: Thank you.
23	So thank you, Mr. Sandoval. You are released
24	from the stand and free to leave the hearing if you like.
25	But if you do choose to remain, you will remain sworn in

1 for the remainder of the evidentiary hearing. 2 MR. SANDOVAL: All right. Thank you very much. 3 HEARING OFFICER WEBSTER-HAWKINS: Thank you for 4 your participation. 5 COMMISSIONER MCALLISTER: Thanks very much. We 6 appreciate you. 7 HEARING OFFICER WEBSTER-HAWKINS: So now we will turn on to our next topic, Biological Resources. 8 9 this time, I request the parties provide their witnesses to 10 the stand, the tables in the front of the room, on the 11 topic of Biological Resources. As stated in the notice for 12 today's event, we will swear in the witnesses for all 13 parties on the subject of Biological Resources as a panel. 14 Mr. Harris, I see you have a comment or question. 15 MR. HARRIS: Yeah, just a point of procedural 16 question here. Sorry, I'm going to try to not burn 17 people's ears up with this microphone, so I'll get it 18 right. 19 There were some threshold procedural issues while 20 the panel comes up that I wanted to address, and you've 21 addressed most of them in your opening statements, so it's mostly just seeking some clarifications. 22 23 HEARING OFFICER WEBSTER-HAWKINS: Mm-hmm. 24 MR. HARRIS: So if you don't mind, I'd like to 25 proceed to those procedural issues quickly.

HEARING OFFICER WEBSTER-HAWKINS: Yes.

MR. HARRIS: Okay. Thank you.

First off, we have some corrections to our testimony that will be handled by Dave Stein, who is a first witness on this panel. We've got just things where, production issues were, instead of document numbers, like web links appeared. And we'll make those corrections to our opening testimony at that point with your permission.

HEARING OFFICER WEBSTER-HAWKINS: Thank you

MR. HARRIS: In terms of witness updates and opening statements that we filed yesterday, a couple of updates there. For our second panel, Scott Crawford will not be giving an opening statement. We've consolidated his statement with the opening statement from Ms. Moss. For the third panel, Victor Grille is not giving an opening statement now, again, consolidating time to keep us on schedule. And for the fourth panel, it will be Lucas Thexton instead of opening statements from Victor Grille. And again, those are just -- oh, on mic -- just minor changes there. We've already dealt with Mr. Mohanty's resume, so that's good.

I do have some questions, and I think you actually clarified this at the beginning, about the nature of some of the non-sworn testimony that you're going to be receiving today. And I understand that you're not going to

1 be swearing in witnesses from the department, for example, 2 or from DSOD. Are you intending to treat their 3 participation here, though, as evidence, as testimony, or 4 as public comment? 5 HEARING OFFICER WEBSTER-HAWKINS: As stated, they will not be sworn in, so their statements will not be 6 7 testimony. They will be accepted as statements from agency 8 representatives afforded the weight that agency 9 representative comments deserve. 10 MR. HARRIS: Yeah, and I think you clarified that 11 at the beginning, so just excuse me --12 HEARING OFFICER WEBSTER-HAWKINS: Yeah. 13 MR. HARRIS: -- for sticking to my script --14 HEARING OFFICER WEBSTER-HAWKINS: Right. 15 MR. HARRIS: -- but thank you for that clarification. 16 17 And there's also some attorneys for various state 18 agencies identified. I assume that's just a similar 19 function, like Ms. Neumyer and myself. They're not going 20 to be attorney witnesses; is that correct? 21 HEARING OFFICER WEBSTER-HAWKINS: I have not 22 received any information about attorney witnesses, although 23 we have invited agency representatives to address the 24 questions posed by the Committee, which in some cases have 25 asked them to summarize their legal authority and

1 regulatory authority. So we will be asking questions that 2 could touch upon the expertise of an attorney. But, again, 3 they're not testifying as witnesses. They're providing 4 information on behalf of their agency. 5 MR. HARRIS: Okay, I appreciate that 6 clarification. We may want the opportunity to respond to 7 some of those things, either now or in writing, depending on what comes out at the record. So a little unusual 8 processes for this hearing, you know? We're typically 9 seeing pre-filed testimony and sticking to that. But I 10 11 want to compliment you on your opening because you pretty 12 much addressed all the questions Ms. Neumyer and I could 13 put together on our way here, so thank you for those 14 things. 15 Thank you for that opportunity. 16 HEARING OFFICER WEBSTER-HAWKINS: Thank you. 17 MR. BABULA: Hearing Officer Webster-Hawkins? HEARING OFFICER WEBSTER-HAWKINS: 18 Yes? 19 MR. BABULA: I just have kind of a couple 20 comments in a seminal vein. 21 So just to set the table, our witness, Mr. Chris 22 Huntley, who is the primary Staff witness for the 23 biological resource section, and because Staff is 24 responsible for evaluating the impacts, assessing 25 compliance with laws and developing mitigation measures,

and so for the purposes of this, we anticipate Mr. Huntley will take the lead in responding to the questions regarding the content of the Biological Resources section of the FSA, while we acknowledge that CDFW Senior Environmental Scientist Supervisor Jeremy Pohlman is available in a supporting role to provide input within the scope of his expertise as CDFW's role as a trustee agency, and so, and he did summarize that at the beginning of this proceeding.

The other point I want to raise just for clarification is that in the Committee's order, you reference the status of the Incidental Take Permit from CDFW. But this is a CEC proceeding and the Energy Commission is issuing the Take Permit through our certification, so I just want to make sure we're clear on that.

HEARING OFFICER WEBSTER-HAWKINS: Great. And we will be asking questions about that and your witnesses can clarify those factual statuses as we go through.

MR. BABULA: Thank you.

HEARING OFFICER WEBSTER-HAWKINS: Yes.

I have a clarifying question back to Mr. Harris. You referenced up to four panels. What are your -- what were those references for? Right now it's, from the Committee's perspective, we have invited all the expert witnesses for the Biological Resources.

1 MR. HARRIS: Yeah, correct. Ms. Neumeyer and I 2 were counting panels to begin with. We considered the one 3 you just finished with the Air District as the first panel, 4 Biology --5 HEARING OFFICER WEBSTER-HAWKINS: MR. HARRIS: -- then the Water Resources. 6 And 7 then, so they're not numbered, I apologize. 8 HEARING OFFICER WEBSTER-HAWKINS: Thank you. 9 MR. HARRIS: We're just trying to keep ourselves straight. 10 11 HEARING OFFICER WEBSTER-HAWKINS: Okay. 12 MR. HARRIS: Thank you for the clarification. 13 HEARING OFFICER WEBSTER-HAWKINS: I just wanted 14 to make sure we were -- we have all the witnesses here 15 around Biological Resources and that we weren't breaking it 16 up into four subpanels. 17 MR. HARRIS: Yeah, I thought what you thought 18 what we thought, so we're on the same page, so --19 HEARING OFFICER WEBSTER-HAWKINS: Great. 20 Wonderful. 21 Okay, so we have a list of Applicant witnesses as 22 was filed into the docket this week. I'm going to be 23 confirming the presence of the witnesses. However, if 24 there's been a change or there's a new witness, please let 25 us know before we swear you in.

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So just focusing on the witnesses right now, do
 1
 2
    we have Kate Moss? Thank you. And can you please state
 3
    and spell your name for the record?
 4
              MS. MOSS:
                         Thank you. My name is Kate Moss,
 5
    spelled K-A-T-E M-O-S-S.
              HEARING OFFICER WEBSTER-HAWKINS: Thank you.
 6
 7
              Do we have Scott Crawford?
 8
              MR. CRAWFORD: Yes. Scott Crawford is
9
    S-C-O-T-T C-R-A-W-F-O-R-D.
10
              HEARING OFFICER WEBSTER-HAWKINS: Great.
11
              Do we have David Stein?
12
              MR. STEIN: Yes. David Stein, D-A-V-I-D
    S-T-E-I-N. That's the last name.
13
14
              HEARING OFFICER WEBSTER-HAWKINS:
                                                Thank you.
15
              And do we have -- I know Laurel Lees is here.
16
    Are you testifying as a witness?
17
              MS. LEES: Yes.
18
              HEARING OFFICER WEBSTER-HAWKINS: Can you please
19
    state and spell your name just for the witness panel?
20
              MS. LEES: Yes. Laura Lees, L-A-U-R-E-L L-E-E-S.
21
              HEARING OFFICER WEBSTER-HAWKINS:
                                                Thank you. And
22
    Cody Niehus? Sorry if I mispronounced that.
              MR. NIEHUS: That's okay. Cody Niehaus, C-O-D-Y
23
24
    N-I-E-H-U-S.
25
              HEARING OFFICER WEBSTER-HAWKINS:
                                                 Thank you.
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And these are all the witnesses for the
 1
 2
    Applicant, correct, on biological resources?
 3
              So turning to the staff witnesses, Mr. Babula,
 4
    you mentioned Chris Huntley is here.
 5
              Can you state and spell your name?
              MR. HUNTLEY: Chris Huntley, C-H-R-I-S
 6
 7
    H-U-N-T-L-E-Y.
8
              HEARING OFFICER WEBSTER-HAWKINS: And do you have
9
    any other witnesses that will be testifying for Staff on
10
    Biological Research?
11
              MR. HUNTLEY: No, ma'am.
12
              HEARING OFFICER WEBSTER-HAWKINS: Thank you.
13
              And then for the Intervenor Center for Biological
14
    Diversity, your witness is via Zoom; correct?
15
              MS. GRAVES: That's correct.
              HEARING OFFICER WEBSTER-HAWKINS: And Is that
16
17
    Ileene Anderson?
18
              MS. GRAVES: It is.
19
              HEARING OFFICER WEBSTER-HAWKINS:
                                                 And, Ms.
20
    Anderson, welcome. Let's do a mic check and make sure we
21
    can hear you. If you can state and spell your name for the
22
    record?
23
              MS. ANDERSON: Yes, my name is Ileene Anderson,
24
    I-L-E-E-N-E, Anderson, A-N-D-E-R-S-O-N. Can you hear me
25
    clearly?
```

```
1
              HEARING OFFICER WEBSTER-HAWKINS: Yes.
 2
    you.
 3
              MS. ANDERSON: Great. Thanks.
 4
              HEARING OFFICER WEBSTER-HAWKINS: So now I'm
 5
    going to administer the oath for the witnesses who have
    just identified and introduced themselves. And then we
 6
 7
    will ask each of you individually whether you agree.
 8
              So to those witnesses, do you swear or affirm
9
    that the testimony you are about to give in this proceeding
10
    is the truth, the whole truth, and nothing but the truth?
              Ms. Moss?
11
12
              MS. MOSS: I do.
13
         (Kate Moss is sworn.)
14
              HEARING OFFICER WEBSTER-HAWKINS: Mr. Crawford?
15
              MR. CRAWFORD: I do.
16
          (Scott Crawford is sworn.)
17
              HEARING OFFICER WEBSTER-HAWKINS: Mr. Stein?
              MR. STEIN: Yes.
18
19
          (David Stein is sworn.)
20
              HEARING OFFICER WEBSTER-HAWKINS: Ms. Lees?
21
              MS. LEES: I do.
22
          (Laurel Lees is sworn.)
23
              HEARING OFFICE WEBSTER-HAWKINS: And Mr. Niehus?
24
              MR. NIEHUS: I do.
25
          (Cody Niehus is sworn.)
```

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HEARING OFFICER WEBSTER-HAWKINS: Mr. Huntley?
 1
 2
              MR. HUNTLEY: Yes, I do.
 3
          (Chris Huntley is sworn.)
 4
              HEARING OFFICER WEBSTER-HAWKINS:
                                                 And Ms.
 5
    Anderson?
 6
              MS. ANDERSON: Yes, I do.
 7
          (Ileene Anderson is sworn.)
 8
              HEARING OFFICER WEBSTER-HAWKINS:
                                                 Thank you.
 9
              So as mentioned earlier, we also very much
    appreciate that the Department of Fish and Wildlife
10
    accepted our invitation to join this conversation from CDFW
11
12
    and to be available for questions from the Committee on the
13
    agency's review of this project. We will not be swearing
14
    you in.
15
              Can you please state and spell your names for the
16
    record and provide your titles as well?
17
              MR. POHLMAN: Yes, Jeremy Pohlman, J-E-R-E-M-Y
    P-O-H-L-M-A-N. And I'm a Senior Environmental Scientist
18
19
    Supervisor for the California Department of Fish and
20
    Wildlife. Thanks.
21
              HEARING OFFICER WEBSTER-HAWKINS:
                                                 Thank you.
22
              MS. GERMINARIO: Good morning. Lena Germinario,
23
    L-E-N-A G-E-R-M-I-N-A-R-I-O. And I'm an attorney for CDFW.
24
    Thank you.
25
              HEARING OFFICER WEBSTER-HAWKINS:
                                                 Thank you very
```

```
1
    much.
 2
              So we're going to begin with opening statements,
    beginning with the Applicant.
 3
 4
              Mr. Harris, would any of your experts like to
 5
    make an opening statement on the topics identified in the
 6
    order after hearing?
 7
              MR. HARRIS: Yes. So first we have the
 8
    administrative corrections that Mr. Stein is going to do,
9
    and then we'll turn it over to Ms. Moss.
10
              HEARING OFFICER WEBSTER-HAWKINS:
                                                 Thank you.
                  OPENING TESTIMONY BY DAVID STEIN
11
12
              MR. STEIN: So I'll try to go through these very
13
              The first two are typographic errors that
    quickly.
    appeared first on page four of our --
14
15
              HEARING OFFICER WEBSTER-HAWKINS: Excuse me, Mr.
16
    Stein. If you could identify the exhibit number that
17
    you're referencing?
18
              MR. STEIN: I'm sorry. The exhibit number would
19
    be 1233.
              It's our opening testimony.
20
              HEARING OFFICER WEBSTER-HAWKINS: Mm-hmm. Thank
21
    you.
          And what page?
22
              MR. STEIN:
                          And it's page four.
23
              HEARING OFFICER WEBSTER-HAWKINS: Ms. Lopez, are
24
    you able to bring up Exhibit 1233, page four?
25
              Is this the correct page?
```

1	MR. STEIN: No, it's not. That's maybe Roman
2	number four. If you could go forward to page four in
3	the
4	HEARING OFFICER WEBSTER-HAWKINS: I'm having a
5	little trouble hearing you, Mr. Stein.
6	MR. STEIN: I'm sorry.
7	HEARING OFFICER WEBSTER-HAWKINS: Thank you.
8	MR. STEIN: There we are. That is the correct
9	page.
10	HEARING OFFICER WEBSTER-HAWKINS: All right. And
11	if you'd like to provide the correction?
12	MR. STEIN: So the correction is in the third
13	paragraph before Item B, Facility Location, the second to
14	the last sentence there, beginning with "Dry air." At the
15	very end of that sentence, the number five should be four.
16	HEARING OFFICER WEBSTER-HAWKINS: Okay.
17	MR. STEIN: And then on the very next page
18	HEARING OFFICER WEBSTER-HAWKINS: Page five?
19	MR. STEIN: page five, the second bullet on
20	that page at the top should be stricken.
21	HEARING OFFICER WEBSTER-HAWKINS: The entire
22	bullet should be stricken?
23	MR. STEIN: The entire bullet should be stricken.
24	HEARING OFFICER WEBSTER-HAWKINS: Thank you.
25	MR. STEIN: And then turning to the production

```
1
    errors that Mr. Harris mentioned, the first of those begins
 2
    on page 20. There's a large appendix at the beginning of
 3
    the testimony, so it's, bear with me, it's actually page 69
 4
    of the PDF and page 20 of the testimony.
 5
              HEARING OFFICER WEBSTER-HAWKINS: So page 69 of
    the PDF, but paginated as page 20 of the testimony?
 6
 7
              MR. STEIN: Correct.
              HEARING OFFICER WEBSTER-HAWKINS:
 8
                                                 Mm-hmm.
              MR. STEIN: And it's in the -- in Item C under
9
    Introduction, the list of exhibits. My feeble eyes are
10
11
    unable to read that little number at the bottom right
12
    there, but the number we're looking for is 20.
13
              Elizabeth, can you identify? It is page 69 of
14
    the PDF, paginated as page 20. Elizabeth, it looks like at
15
    the top of your Adobe browser, you may be beyond page 69.
16
    You could probably jump straight to page 69 by putting that
17
    number in the box.
18
              MR. STEIN:
                           There we go.
19
              HEARING OFFICER WEBSTER-HAWKINS:
                                                 Thank you.
20
    Excellent.
21
                           Okay, so 2, 3, 4, 5, 6, 7, 8, 9, 10,
              MR. STEIN:
22
    11, 12, the 13th bullet on that page appears as an internet
23
    hyperlink --
24
              HEARING OFFICER WEBSTER-HAWKINS:
25
              MR. STEIN: -- instead of the name of an exhibit.
```

1 HEARING OFFICER WEBSTER-HAWKINS: And which 2 exhibit number should it reference? 3 MR. STEIN: It should be Exhibit 1155, which is 4 the Willow Rock Preliminary Staff Assessment Comments 5 Report --HEARING OFFICER WEBSTER-HAWKINS: 6 Okay. 7 MR. STEIN: -- TN264316, dated June 16, 2025. 8 HEARING OFFICER WEBSTER-HAWKINS: Great. Okay. 9 The next is on page 23, so just a MR. STEIN: 10 couple of pages forward, or it's page 72 in the PDF, if 11 it's more convenient to find it that way. There we go. 12 The very last bullet at the top of the page is also an 13 internet hyperlink. It should read, "Exhibit 1040, High-14 Res Figures V1, File 1 of 2 (TN254813), dated March 4, 15 2024." 16 Want me to go to the next one? 17 HEARING OFFICER WEBSTER-HAWKINS: Yes. 18 MR. STEIN: On page 26 of the testimony, which is 19 page 75 of the PDF, there we go, the one, two, three, 20 four -- fifth bullet is an internet hyperlink that should 21 be replaced by "Exhibit 1153, Consolidated Email Responses 22 to CEC Staff on Lahontan's request -- February 26, 2025 23 request for additional information." That request is 24 TN261932. And the actual exhibit number has a TN262349 and 25 is dated March 25th, 2025.

Then we need to go forward to page 122 of the PDF or page 73 in the testimony. Should be page 122 of the PDF. There we go. The bottom of that page, there's an internet hyperlink that should be replaced by "Exhibit 1155, Willow Rock Preliminary Staff Assessment Comments Report (TN264316), dated June 16th, 2025.

What page? Sorry, bear with me here, please.

Okay, the next is on page 169 of the PDF. There it is.

The second from the bottom bullet is an internet hyperlink that should be replaced by the same reference I just stated, "Exhibit 1155, Willow Rock Preliminary Staff Assessment Comments Report (TN264316), dated June 16th, 2025."

Almost there. Sorry.

Next is page 173 of the PDF. There we are. So there are two internet hyperlinks there, the last two bullets. The first of those should be replaced with "Exhibit 1119, Willow Rock Data Request Set 3 Response (TN259675), dated October 23rd, 2024." And the second hyperlink should be replaced with, "Exhibit 1132, Willow Rock Data Request Set 5 Responses Report (TN260808), dated December 23rd, 2024."

And then there's just one more on page 192 of the PDF. There it is. So there's a hyperlink of the third bullet from the bottom. That hyperlink should be replaced

with, Exhibit 1000, Section 6, Alternatives: Gem Energy 1 2 Storage Center (TN240751-23), dated December 1st, 2021." 3 And then the text continues to an Exhibit 1000, which is --4 actually, that's the same. 5 HEARING OFFICER WEBSTER-HAWKINS: Mr. Stein, it 6 looks like the next un-hyperlinked text references Exhibit 7 1090. Should that be a new bullet? MR. STEIN: That should be a new bullet. 8 9 HEARING OFFICER WEBSTER-HAWKINS: Okay. So those 10 are two separate items. Okay. 11 MR. STEIN: And that completes my corrections, 12 Madam Hearing Officer. 13 HEARING OFFICER WEBSTER-HAWKINS: Thank you. Ιn 14 looking at those corrections, it did appear that they were 15 largely administrative corrections to properly name the 16 documents, and that the links themselves did reference the 17 TN numbers, as stated by Mr. Stein. 18 Staff, do you have any objections to those administrative corrections? 19 20 MR. BABULA: No objections. I don't know if the 21 Hearing Officer wants them to just submit something in the 22 docket that just reflects these changes that we just made. 23 HEARING OFFICER WEBSTER-HAWKINS: Correct. And 24 just for the complete record, because the mic kind of cut 25 out, you have no objections; correct?

1	MR. BABULA: Correct.
2	HEARING OFFICER WEBSTER-HAWKINS: Thank you.
3	MR. BABULA: No objections.
4	HEARING OFFICER WEBSTER-HAWKINS: Yes. And I
5	would agree that it would be useful to file an errata
6	containing all of those to perfect the record. Thank you.
7	And the Center, do you have any objections?
8	MS. GRAVES: No objections.
9	HEARING OFFICER WEBSTER-HAWKINS: Thank you.
10	Okay.
11	MS. NEUMYER: Apologies
12	HEARING OFFICER WEBSTER-HAWKINS: Yes?
13	MS. NEUMYER: Hearing Officer, when you say
14	submit an errata, is a single sheet of paper, okay, with
15	just the update, rather than refiling the testimony?
16	HEARING OFFICER WEBSTER-HAWKINS: That's correct.
17	Thank you.
18	MS. NEUMYER: Thank you.
19	HEARING OFFICER WEBSTER-HAWKINS: Yes. Save the
20	PDF space as well. Save the digital. Right, yeah, no
21	redline required, yeah, unless, I mean, I think you could
22	just submit the actual those pages or, you know, however
23	it best reflects the corrections administratively.
24	Okay, with that, back to opening statements. Do
25	we have any opening statements on behalf of Applicant?

MS. MOSS: Yes.

HEARING OFFICER WEBSTER-HAWKINS: Thank you. Ms. Moss, go ahead.

OPENING TESTIMONY BY KATE MOSS

MS. MOSS: Thank you. Good morning. Again, my name is Kate Moss. I'm a Principal Wildlife Biologist with WSP. And together with Scott Crawford, Dave Stein, Laurel Lees, and Cody Niehus, we comprise the panel of experts for the subject matter of biological resources, as further detailed in the previously filed Applicant's witness list.

My opening statement today addresses topics identified in the order filed by the Committee on August 18th, 2025, with respect to Biological Resources, including the following subtopics identified as disputed or unresolved between the parties: the mitigation acreage and ratios; the treatment of temporary impacts; mitigation for actual impacts versus acreage surveyed; definition, identification, and avoidance or mitigation measures of Western Joshua tree woodland.

My testimony today is based on information collected from available background resources, such as public databases and data collected from the project site by WSP biologists and other biological consultants. These field programs were selected based on input from regulatory agency Staff and designed based on methods accepted in the

state of California, and include field-based studies to document the presence of desert tortoise, Mojave ground squirrel, Swanson's Hawk nests, Crotch's bumble bee, Burrowing Owls, and rare plants, further, field programs, including verification and updating ecosystem mapping and census of Western Joshua tree.

In preparing the statement, I've also reviewed opening and rebuttal testimonies filed by CEC Staff and Intervenor Center for Biological Diversity, or CBD.

Data collected from these programs provided the foundation for the impact analysis submitted to the California Energy Commission, as well as subsequent supplements, data request responses, and permit applications.

Based on the data and analysis submitted to the CEC by the Applicant and conditions provided in the final Staff assessment, except for those I will outline below, we agree with the conclusion that the project would result in less than significant impacts on biological resources.

Regarding the Final Staff Assessment and Rebuttal Testimony filed by CEC Staff, we disagree with the following conditions or aspects of proposed Conditions of Certification. The first, the treatment of temporary habitat loss, the same as permanent loss as it relates to mitigation of lands.

The second, the proposed mitigation ratio of 3-to-1 for all impacted lands. The project is anticipated to result in the permanent loss of habitat, mostly in the Willow Rock facility footprint, but also at pole locations along the gen-tie Line. If an architectural rock berm is required to store material from the cavern, an additional 74.6 acres of permanent habitat loss in P1 is anticipated. Temporary habitat loss is expected in areas like laydowns and parking areas that will be required during construction.

Generally, permanent habitat loss is described as areas that will no longer be available to wildlife for the duration of the project because those areas have been converted into part of the facility by installing buildings or impermeable surfaces. Temporary habitat loss is generally used to describe areas that will become available to wildlife after construction is complete, although may be modified or altered state.

In the case of the project, areas that will be used for laydown will be cleared of vegetation for the duration of the construction, but soils will be decompacted and recontoured post-construction. As per CoC Bio 8, these areas will also be revegetated with native grasses and forbs that can support native wildlife species, including Crotch's bumble bee.

Further, as per CoC Bio 8, woody debris collected and stored during construction will be placed over these temporarily disturbed areas, and the Applicant will be required to maintain these areas and control weeds for five years post-construction. As such, these areas will be available to wildlife post-construction, although in a modified capacity, unlike permanent habitat loss.

CEC Staff treats the loss of habitat as permanent, regardless of whether it would be permanent or temporary based on the description I just provided. While it's reasonable to consider the duration that temporary impacted habitat would be unavailable to wildlife when defining mitigation requirements, treatment of temporarily impacted habitat, the same as permanent, does not acknowledge that the areas will become available to wildlife after construction, nor does it consider the replanting and maintenance requirements of Bio 8. The results of treating areas the same is that the CoC require more mitigation for temporarily impacted areas than permanent, as these areas will not only require offsetting equal to permanent loss, but also replanting and restoration measures.

The Willow Rock site and ancillary properties occur in a semi-natural state and support vegetation typical of the region, including Western Joshua tree.

These areas are impacted in the existing condition due to their location between active roads and rail lines, off-road vehicle driving, and illegal dumping. These factors have impacted the current habitat conditions of the project area due to direct alteration, for example, from dumping, as well as sensory disturbance from noise and light and human presence associated with the road and rail.

Burrowing Owls surveys conducted for the project following accepted California Department of Fish and Wildlife, or CDFW, protocols outlined in CDFW 2012 Staff Report did not identify nesting Burrowing Owls in the project area or 500-meter buffer.

Crotch's bumble bee surveys were conducted based on protocols outlined in the Survey Conditions for California Energy Species Act, Candidate Bumble bee Species. Crotch's bumble bee was observed in the project area foraging on *Phacelia*, but no hives were observed. The FSA recommends a 3-to-1 mitigation ratio for all permanent and temporary impacts to account for these long-term temporal losses of Burrowing Owl and Crotch's bumble bee habitat function within the project footprint.

However, the results of the 2023 and 2024 surveys support the application of a 2-to-1 mitigation ratio for permanent impacts due to the following biologically relevant facts: the general lack of high-quality Burrowing

Owl habitat within the project area; the absence of active burrows within the project area and adjacent 500-foot buffer zone; the absence of Burrowing Owl observations within the project area and infrequent and transient nature of Burrowing Owl observations outside of the project footprint; the limited diversity of Crotch's bumble bee nectar sources within the project area with those species documented flowering only in the early flight season; and the absence of hives establishment or nesting behavior within the project area.

Similarly, a 1-to-1 ratio for offsetting is considered appropriate for temporarily disturbed areas, given the results of the field studies and the requirement of Bio-8 to replant native plant species that support Crotch's bumble bee for foraging.

Regarding the testimony submitted by CBD, we disagree with the assertion that the Applicant's Western Joshua tree census data is incomplete. Complete census surveys were conducted for Western Joshua tree across the project area, including the gen-tie alignments. Areas with no right-of-way entry were necessarily excluded from the survey, as we described in the January 2025 Supplemental Joshua Tree Census Report. However, these areas would be spanned during construction to avoid impact as feasible. Western Joshua tree census surveys were conducted in 2023

and April of 2024 and verified again December 8th and 9th of 2024.

Further, we disagree that the acreage of Joshua tree woodland that would be impacted remains uncertain, pending additional surveys, consistent with CEC Staff

Determination and Rebuttal Testimony, Docket No. 21-AFC-02.

As noted, Western Joshua tree census has been completed according to CDFW's census instructions. These data were used when estimating whether Western Joshua tree canopy meets the one percent or greater cover criteria for classification defined by the California Native Plant Society. Based on these data, Western Joshua tree woodlands were not identified in the project area or gentie line, other than a mapped occurrence along an alternative gen-tie route.

Finally, regarding CBD's assertion that the FSA improperly defers the development and disclosure of the Reservoir Management Plan, preparation of a Reservoir Management Plan as outlined in the FSA Condition of Certification Bio-7 is a Condition of Certification and is not deferred mitigation. Condition of Certification Bio-7 outlines clear measures that must be implemented and the Applicant is in agreement with this condition.

The Reservoir Management Plan will be submitted prior to construction of the reservoir so that the

requirements set out in the FSA are met proactively. This approach is standard industry practice. Submitting the plan early allows for evaluation of its content and facilitates timely incorporation of feedback.

As outlined in the Condition of Certification
Bio-7, the Reservoir Management Plan will include detailed
design of a floating reservoir cover, methods to minimize
wildlife entrapment, including fence type and height and
escapement ramps, potential remedial measures including
installation of wildlife deterrence and a habitat
protection action, details on monitoring methods and
monthly reporting, or a process for evaluating the
efficiency of the cover, ramps, and other wildlife
protection measures.

Thank you.

16 HEARING OFFICER WEBSTER-HAWKINS: Thank you Ms.

17 Moss.

We can turn now to Staff's expert witness; is that correct? Thank you.

OPENING TESTIMONY BY CHRIS HUNTLEY

MR. HUNTLEY: Good afternoon and thank you

Commissioner McAllister, Commissioner Gallardo, and Hearing

Officer Webster-Hawkins. My name is Chris Huntley. I'm

the Director of Biological Resources at Aspen Environmental

Group. I've been a wildlife biologist for over 30 years,

working mostly in the Mojave Desert. Together with my colleague Jamie Miner and in close consultation with the California Department of Fish and Wildlife, I prepared the Biological Resource section of the Willow Rock FSA, the Biological Resources Rebuttal Testimony, and the Biological section of the Supplemental Staff Testimony.

In this opening testimony, I'd like to identify the key species impacted by the project and the primary mitigation measures developed to minimize or address those impacts. I wanted to highlight areas of disagreement with the Applicant and Intervenors and where our conclusions differ. And I'd like to provide Staff's rationale to support the conclusions presented in the FSA in here today.

So while there's a variety of sensitive species that may be impacted by the proposed project, there are three key special status species that we wanted to talk about, and they include Western Joshua tree, Burrowing Owl, and Crotch's bumble bee. All three of these species are afforded special protection under California law and require careful impact analysis and project-specific mitigation. Potential impacts to these species range from direct mortality, loss of habitat, disturbances that can affect behavior such as foraging and breeding. And the primary mechanism for mitigation relevant to this hearing is the off-site land acquisition and the various avoidance

and minimization measures presented in Staff's Conditions of Certification.

So here are some of the areas of disagreement and our rationale for our conclusions.

The Applicant and CBD, or the Center, have raised concerns with the analysis proposed CoCs identified in the FSA and our rebuttal testimony. I'd first like to present the primary areas of disagreement with the Applicant and then, if I may, address concerns raised by the Center.

As mentioned previously by the Applicant, there's several areas of disagreement, including the treatment of permanent versus temporarily impacted land, use of appropriate mitigation measures, and the actual impacts to habitat analyzed in the proposed project. I wanted to talk a little bit about permanent versus temporarily impacted lands.

Throughout its testimony, the Applicant distinguishes between permanent and temporary impacts based on how different areas of the project site are being used. And the Applicant disagrees with Staff's mitigation approach of treating what they characterize as temporary impacts as, in effect, permanent. And this is especially so since Staff is still recommending basic restoration of temporarily disturbed areas.

The Applicant's distinction appears reasonable

but is not scientifically or legally justified for the following reasons.

Desert ecosystems, including the systems that occur on the proposed project site, are extremely slow to recover from physical disturbance such as grading or continued use due to the harsh climate, limited rainfall, and fragile soils. The long five-year plus construction period with extensive disturbance on the main portion of the site can cause impacts on other portions of the project site and neighboring habitat through dust, noise, night lighting, and day-to-day activity impacting nearby species. Five years of equipment lay down and parking can result in many more years of habitat damage.

Physical disturbance alters the chemical and physical structure of desert soils and can result in compaction, the loss of native seed banks, and in some cases, increased erosion and dust, which are known factors that degrade habitat both on and off the project site.

Grading removes vegetation and alters microhabitats critical for shelter, nesting, and foraging for
many species, including bumble bees and other small
animals, and increases the potential for the colonization
of weeds.

Disturbed areas in the desert are also readily colonized by weedy species such as Sahara mustard and

Russian thistle, which are very common in the region.

These weeds then spread to adjacent habitats and can

degrade habitat or degrade habitat in undisturbed areas.

As we all know, weeds are difficult to control and they can also alter fire ecology and desert ecosystems by providing light, fast-burning fuels.

Restoration of desert areas is also costly, uncertain, and is difficult to restore habitat functions without extensive long-term management. Restoration is a slow process and it can take decades to reach functional habitat values that occurred prior to disturbance.

Numerous agencies have considered temporary impacts to desert communities as permanent and mitigating accordingly because of these factors. In fact, we cited this in our document, but Lovich and Bainbridge found that recovery times for disturbed desert areas range from 50 to 300 years for vegetation and biomass and can be up to 3,000 years for full ecosystem recovery.

The takeaway is that desert ecosystems are fragile and slow to heal. Grading and other disturbances often lead to permanent ecological shifts in habitat use by the species that were once there. Plants and wildlife will be largely excluded from the site for years. Restoration is uncertain, expensive, and rarely successful. Treating these disturbances as permanent is ecologically and

scientifically justified.

Staff notes that because the FSA treated temporary impacts as permanent, we modified Condition of Certification Bio-8 to only require stabilization of temporary disturbed areas rather than seeking full restoration requirements to pre-disturbance levels, which we would have done in other areas if we thought the restoration could be successful. This condition was modified to reduce performance requirements and focus more on the management of weeds, and this was discussed, at least briefly, in the PSA workshop.

I'd like to talk a little bit about the Applicant comment on mitigation ratios. The Applicant proposes offsite land acquisition for Burrowing Owl and Crotch's bumble bee at a 2-to-1 ratio for permanent impacts and a 1-to-1 ratio for temporary impacts. Conversely, Staff is recommending a single 3-to-1 mitigation ratio for both temporary and permanent impacts.

In consultation with the regulatory partners,

Staff concludes that the Applicant's 2-to-1/1-to-1 land -or mitigation ratios are not sufficient to fully mitigate
for the impacts to Burrowing Owl and Crotch's bumble bee.

As described in the FSA, the site and adjacent laydown
parking and staging areas, as well as much of the gen-tie,
are considered suitable habitat for these species. Staff

acknowledges there are areas that support higher concentrations of nectar resources where bumble bees were observed. However, the entire project site is suitable habitat and can be used by the species.

In addition, there are multiple factors that were considered in development to the proposed mitigation ratios for Burrowing Owl and bumble bees. Some of these include seven Crotch's bumble bee queens and 35 workers were detected on -- near the project site, which means these state candidate species listed are there and are using the project site. Crotch's bumble bee habitat is not limited to the patches of prime foraging habitat identified by the Applicant, and virtually all of the project site supports suitable habitat for nesting or foraging bees.

Bees can nest close to or over a kilometer from foraging areas, and suitable mammal burrows, downed Joshua trees, cavities within Joshua trees, and other debris piles are present and can be used by the bees. I know from firsthand experience that bumble bee nests are very difficult to detect, and they are often overlooked during surveys.

The presence of bumble bee occurrences are also likely to ebb and flow depending on seasonal rainfall and wildflower expression. The species is a generalist and is known to forage across a wide range of flowering plants.

Regarding owls, as identified in the Burrowing Owl Focused Survey Report, dated January 2024, the surveys resulted in a total of 29 unoccupied suitable burrows for Burrowing Owls, several of which were found on the energy storage facility area or adjacent laydown areas.

It's important to note that surveys provide a snapshot of data, and Staff recognizes that while no owls or signs were detected at those locations, Burrowing Owl are known from the region, were detected by the Applicant in the broader area, and could use the burrows that are present on the project site at any given time.

In addition, and as described in our FSA, recent guidance from CDFW has indicated that suitable burrows or cavities that could support Burrowing Owl be assumed active unless three years of surveys have been conducted.

Likewise, as no wintering surveys were conducted, Staff cannot affirm that owls are using the site in the winter or not.

In addition, the surveys did not cover all areas immediately adjacent to the project site because of access restriction noted by the Applicant, but based on the overall site habitat, presence can be assumed in areas that were not surveyed. Figure 5 of the Applicant's Burrowing Owl Survey Report shows a number of potential burrows in the project site as discussed previously.

Another important consideration is that the Applicant elected to seek take coverage under the California Endangered Species Act for Crotch's, bumble bee, and Burrowing Owl because they were either detected on the project site or have a potential to occur during construction. Seeking coverage requires Staff to assume the site is occupied and to provide mitigation measures to offset potential impacts should those species occur in the future during construction.

Seeking take coverage also provides an avenue for the Applicant to seek buffer reductions that might not otherwise have been available should owls or bees occur in adjacent lands along the gen-tie or other areas. It also provides coverage, as we said, for animals that might be displaced from adjacent lands.

Based on these factors, the 3-to-1 ratio proposed to mitigate impacts from the project was not arbitrary, and as noted in the FSA, the 3-to-1 ratio accounts for the following impacts.

The 3-to-1 ratio proposed by Staff was, again, developed in consultation with the regulatory agencies and ensures full mitigation, which is a requirement under the California Endangered Species Act: Fish and Game Code section 2081(b) requires the permittees to minimize and fully mitigate all impacts of the authorized take, and

mitigation must be proportional to the extent of the impact; the ratio accounts for the initial replacement of lost habitat, ensures functional equivalency is achieved, accounts for uncertainty and risk, and promotes resilience across landscape by supporting habitat connectivity and ecosystem integrity; the irreversible loss of occupied habitat and potential loss of individual Crotches bumble bees was also considered; the loss of habitat for Burrowing Owl and to account for the disruption of breeding or loss of Burrowing Owls was also accounted for.

The Applicant commented on the mitigation for actual impacts to habitat and not the total acreage survey. The Applicant suggests that the acreage proposed for mitigation in the FSA appears to include the total acreage surveyed for the project area, which includes temporary construction areas, buffer areas around permanent and temporary disturbance footprints, and route options for the gen-tie that would not be built if a preferred pathway is constructed.

Instead, they propose that mitigation should be based on acreage actually impacted by the project, not the optional potential areas. The Applicant suggests that mitigation acreage should be reflected or adjusted to reflect the actual areas disturbed, not the areas surveyed.

Staff considered the amount of temporary impacts

to vegetation and landforms using data provided by the Applicant in the ITP application and other documents, and it focused on the 90 acres of permanent and 198 acres of temporary impacts for the no-berm option. Staff is willing to work with the Applicant to ensure that the most accurate version of the impact table is used and that the with-berm option and no-berm option are both considered in the final impact acreages for both the mitigation requirements and other conditions.

And with that, I'm concluding my response for the $\mbox{\sc Applicant.}$

I would like to now address the concerns raised by the Center for Biological Diversity.

The Center's comment regarding Joshua tree woodlands in compliance with the Conservation Act. The Center was concerned, remains concerned, that the mitigation measures and the Condition of Certification failed to address impacts to Joshua tree woodlands on the project site. The Center is also concerned that the Applicant has not performed complete surveys of all project areas.

So to ensure impacts of Joshua tree woodland were mitigated, Staff revised Condition of Certification Bio-4 to include specific language requiring any impacts to Joshua tree woodland be accounted for and mitigated to the

3-to-1 ratio. Staff also acknowledged that not all of the project footprint has been surveyed to date and there are areas where supplemental surveys would be required to census individual Joshua trees.

As identified in Staff's CoCs, should the project be approved by the Commission, the collection of this data would be required prior to site mobilization and prior to allowing any disturbance of Joshua trees. This would ensure that the project complies with the requirements of the Washington Joshua Tree Conservation Act.

Staff also reviewed the Applicant's response to the one percent threshold for Joshua tree woodland and at this time concurs with the data presented by the Applicant that Joshua tree woodlands are not present on the rest of the project site.

And that concludes my opening testimony and I'm available to answer any questions that the Committee may have. Thank you.

19 HEARING OFFICER WEBSTER-HAWKINS: Thank you Mr. 20 Huntley.

Before we start questions, we'll turn to Ms.

Anderson to provide her opening testimony.

OPENING TESTIMONY BY ILEENE ANDERSON

MS. ANDERSON: Good afternoon Commissioners. Can you hear me clearly?

HEARING OFFICER WEBSTER-HAWKINS: Perfect.

MS. ANDERSON: Great. This is Ileene Anderson and I'm a Senior Scientist and the California Deserts Director at the Center for Biological Diversity. My qualifications are detailed in my opening testimony which has been marked as Exhibit 4000.

Joshua tree woodland is a sensitive natural community ranked as an S3 by the state which means it is ranked as vulnerable, indicating it's vulnerable to extirpation, or local extinction, within California. It's known to occur within the project area.

CEC Staff have acknowledged the construction along portions of the gen-tie alignments would likely cause permanent impacts to Joshua tree woodlands through pole foundation placement and new access roads, as well as temporary impacts from coral installation and detention sites. Staff estimate these impacts could affect between a half-acre and two acres.

In its Final Staff Assessment, Staff originally noted that additional areas of the project footprint, including the Willow Rock Energy Storage Center site and the P1 and P2 parcels, exhibit vegetation consistent with Joshua tree woodland. That conclusion was later revised after the Applicant disputed that these areas meet the California Native Plant Society, or CNPS as it's often

referred to, the CNPS definition which is greater than one percent cover of Joshua trees.

The Applicant's position appears to rest on the claim that average canopy cover across these parcels is less than one percent, but this misapplies CNPS's classification standards. CNPS defines Joshua tree woodland as stand with at least one percent canopy cover by Western Joshua tree provided that juniper and pine cover is less than one percent. That standard applies to discrete stands not the entire project site averaged across dozens of acres. Clusters of Joshua trees can easily meet or exceed the one percent threshold even if a site wide average falls below it.

The Applicant points to the absence of a veg camp woodland designation but the lack of mapping is not evidence that woodlands are absent on the ground. The veg camp data are not exhausted and are often incomplete, which is why site-specific surveys remain essential to identify unmapped but ecologically significant resources.

To accurately assess the presence of Western

Joshua tree woodlands, surveys must evaluate localized tree

density and an ecologically appropriate scale.

One reasonable approach is to delineate protective zones around each tree consistent with the nowork buffers in Bio-12 and then identify where those zones

overlap to form a contiguous patch. The perimeter of those patches can be used to define ecologically relevant polygons within which canopy cover should be calculated. If canopy cover within such polygons meets or exceeds the CNPS one percent threshold, those areas would qualify as woodlands regardless of broader sitewide averages.

Based on my review of the Applicant's own Western Joshua tree survey data, it's my professional opinion that there is a high potential for woodlands to occur within P1, P2, particularly P2 north and the Willow Rock Energy Storage Center site.

Accordingly, the Conditions of Certification should require the Joshua tree woodlands be delineated consistent with the protective buffer approach for individual Western Joshua trees -- that's in my testimony and that I briefly described here today -- and require that that protective buffer around the Joshua tree woodland to avoid and minimize impacts wherever feasible.

I support the revisions to Bio-14 which now require compensatory mitigation for impacts to Joshua tree woodlands. This is a critical improvement. Joshua tree woodlands provide far more than individual trees. They create ecological structure, support wildlife, sustain pollinator communities, and main genetic continuity for the species. Without compensatory mitigation, permanent losses

of woodland stands would go unaddressed. The revised condition appropriately recognizes that impacts to woodlands must be mitigated in a way that preserves these broader ecological functions.

I also support the revisions to Bio-12 which now require updated Joshua tree surveys within the project footprint and within a 50-foot buffer around all project components including the gen-tie, access roads, lay down areas, staging areas, and other facilities.

Importantly, Bio-12 now requires updated censuses before site mobilization for each phase of construction in areas surveyed more than 12 months ago but left undisturbed. It's critical to ensure that new or previously unmapped trees are identified before any take is authorized, consistent with the requirement of the Western Joshua Tree Conservation Act.

Finally, I'd like to address the requirement to avoid and minimize impacts to Western Joshua trees.

The Western Joshua Tree Conservation Act and the accompanying conservation plan establish a clear mitigation hierarchy; first avoid, then minimize, and only as a last resort mitigate impacts to Western Joshua trees. The Act expressly prohibits authorizing take unless avoidance and minimization have been carried out to the maximum extent practicable.

In this case, feasible avoidance measures are available. For example, the option, Above Ground Architectural Berm, could be redesigned such as by breaking it into smaller segments and reducing its footprint, or adjusting its alignment, or relocating it altogether. Such modifications could substantially reduce or avoid impacts to the approximately 467 Western Joshua trees slated for permanent removal and the proposed 17 of them that are proposed for relocation under the with-berm option. This is especially true given that the design leaving flexibility to incorporate avoidance at this stage.

required by law but is also ecologically sound. These trees are long-lived, slow reproducing, and increasingly vulnerable to development and climate stressors.

Preserving existing mature individuals and intact woodland patches is far more effective than attempting to mitigate

for impacts by relocating or paying mitigation fees.

Avoidance and Joshua tree impacts is not only

For these reasons, the Commission should ensure that the project demonstrates avoidance and minimization to the maximum extent practicable before any take authorization is considered.

That concludes my opening statement. Thank you.

HEARING OFFICER WEBSTER-HAWKINS: Thank you very

much, Ms. Anderson. And just to clarify for the record,

1 the revisions that to Bio-12 that you referred to, are 2 those the revisions found in newly identified and admitted 3 Exhibit 2003, the Staff's Supplemental Conditions of 4 Certification? 5 MS. ANDERSON: Yes, I believe so. HEARING OFFICER WEBSTER-HAWKINS: 6 Thank you. 7 Okay. 8 All right, having heard from the opening 9 statements, thank you very much. 10 I'd like to first ask the Committee if they have 11 any questions. 12 Commissioner McAllister? 13 COMMISSIONER MCALLISTER: Well, thanks very much for your testimony. Clearly well considered and I think a 14 15 lot of great material already in the evidentiary record. 16 So a couple of things. 17 DIRECT EXAMINATION 18 COMMISSIONER MCALLISTER: I guess I want to 19 understand from each of you how -- so there's some math we 20 have to kind of wrestle with here, you know, what the 21 ratios are, but ratio of what to what, and so in terms of 22 the actual amount of land that we're talking about being 23 impacted, both temporarily and permanently, and then sort 24 of doing the math to get to the ratios of how much sort of

offset area we need to think about.

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So maybe with a sort of a fairly sharp razor here, can we sort of understand sort of impacts and then resulting offsets from each of your sort of desired approaches to this? That makes sense? Like sort of putting numbers to the amount of territory we're talking about and trying to sort of figure out how close or far the Applicant, Intervenor, and Staff actually are.

HEARING OFFICER WEBSTER-HAWKINS: Right. If we can start with the Applicant, even just summarize your prefiled testimony that --

COMMISSIONER MCALLISTER: Yeah.

HEARING OFFICER WEBSTER-HAWKINS: -- that quantifies the acreage? Because I did hear Staff's witness, Mr. Huntley, suggests that accurate tables would need to be relied upon. And so I think we're wanting to be educated about what those numbers look like now and what might need to occur to make them more accurate if they're not accurate now.

COMMISSIONER MCALLISTER: And also that at least one of you expressed flexibility to work to sort of move towards, you know, to negotiate a little bit and compromise. You know, I'd like to hear. I'm trying to get a sense for how much of that needs to be done.

MS. MOSS: Thanks. This is Kate Moss.

If we could maybe pull up on the screen -- sorry,

1 one second. What's this number? Yeah, 1233. 2 HEARING OFFICER WEBSTER-HAWKINS: Great. 3 1233, the Opening Testimony and Evidence of the Applicant. 4 MS. MOSS: And it's page 33 of that document. 5 HEARING OFFICER WEBSTER-HAWKINS: The paginated 6 page 33? 7 MS. MOSS: Yes. 8 HEARING OFFICER WEBSTER-HAWKINS: 9 That's the table there. So this table MS. MOSS: outlines two scenarios, the scenario where the rock is 10 11 hauled off site, which is the left-hand column of numbers, 12 and where there's a rock berm built on site, which is the 13 right-hand column of numbers. It then lists out, on the far right column, whether that is considered a permanent 14 15 loss or a temporary loss. 16 And on this table, a permanent loss is defined as 17 something that is not available once construction is 18 complete, so as I described, something that's under the 19 facility, under a rock berm, something that is completely 20 modified. 21 Temporary describes an area that could be 22 restored to a degree. So as described, not necessarily 23 desert condition, but replanted with native forbs and 24 grasses and controlled for weeds. 25 It also breaks down those impacts by location, so

1 the facility, the berm, transmission pole locations, and so 2 on. 3 HEARING OFFICER WEBSTER-HAWKINS: And just for 4 clarification, with the acreage related to the transmission 5 poles, would that be like the most impactful route, or --6 I'm looking at the footnotes to that, just try to -- so we 7 can understand sort of what the impact of the route options 8 might have on these acreage numbers. 9 MS. MOSS: I'm going to ask Dave Stein to help 10 with that question. 11 HEARING OFFICER WEBSTER-HAWKINS: Thank you. 12 MR. STEIN: Madam Hearing Officer, I'm not sure 13 I'm prepared to provide an answer for whether the 14 options -- whether the option would change those numbers 15 significantly --16 HEARING OFFICER WEBSTER-HAWKINS: Mm-hmm. 17 MR. STEIN: -- but they're very, very close. 18 HEARING OFFICER WEBSTER-HAWKINS: 19 MR. STEIN: I think the numbers in this table are 20 reasonably good, the worst case estimate of the project 21 disturbance. 22 HEARING OFFICER WEBSTER-HAWKINS: Mm-hmm. Thank 23 you. 24 MR. STEIN: And one of the things that we were 25 attempting to do when we went through the categories of

project elements was to use GIS technology to avoid double counting. So, for example, if there was an access road going through the site construction lay down and parking areas noted in the second column there, Footnote X, that acreage was adjusted slightly down to reflect that we had counted disturbance in that area as an access road instead of as a site construction lay down.

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HEARING OFFICER WEBSTER-HAWKINS: Okay. And then just to expound upon Commissioner McAllister's math question, we're looking at the total permanent and temporary impacted acreage under the berm and without-berm options, and so we would be applying, for math purposes, from Applicant's perspective, 2-to-1 for the permanent acreage reflected in this table and 1-to-1 for the temporary acreage impacts reflected in this table?

> That is correct. HEARING OFFICER WEBSTER-HAWKINS: Okav.

MR. STEIN:

MR. STEIN: So, for example, according to my math, if we apply the 2-to-1 for the without-berm option, 88.8 times two equals 177.6. We would add to that 122.2, which is the temporary at a 1-to-1 disturbance ratio, and that total acreage, the sum of those two temporary and permanent would be 299.8 as an example.

HEARING OFFICER WEBSTER-HAWKINS: Thank you, which if Staff doesn't dispute the acreage that you've

1 quantified here as far as what's to be disturbed, it would 2 be 88.8 plus 122.2 times three would be the mitigation 3 acreage. 4 So turning to Staff, is that the how the math 5 would look for the without-berm option? 6 MR. HUNTLEY: Hearing Officer, yes. We're not 7 disputing the impact acreage identified in the table 8 provided by the Applicant. 9 HEARING OFFICER WEBSTER-HAWKINS: Thank you. 10 It's the multiplier. 11 MR. HUNTLEY: It's the ratios, that's correct, so --12 13 HEARING OFFICER WEBSTER-HAWKINS: Okay, so you're 14 agreed upon the way that you're applying, both of you are 15 quantifying the permanent and temporary impacts in terms of 16 the acreage, it's the multiplier for mitigation? 17 MR. HUNTLEY: That's correct. And I think part 18 of the dispute came up where when we analyze the impacts, 19 we analyze the worst case scenario --20 HEARING OFFICER WEBSTER-HAWKINS: Mm-hmm. 21 MR. HUNTLEY: -- and we should have added some 22 additional text to identify the without-berm option. 23 HEARING OFFICER WEBSTER-HAWKINS: Great. So on 24 this topic, focusing here on this math question, I'd like 25 to turn to the Intervenor's witness to see if you have

anything further you would like to add to this question of the accuracy of this table as far as disturbed impacts, and then the proposal for mitigation acreage?

MS. ANDERSON: Yeah. We don't have any quibble with the calculated acreages.

HEARING OFFICER WEBSTER-HAWKINS: Okay. Good.

MS. ANDERSON: I think, you know, we support the staff's acreage -- mitigation acreage requirement because we agree that in this arid part of the world, it's really hard to re-establish vegetation after a temporary impact. And to have it be functional habitat, there is a temporal impact there between the time you're trying to start getting it going and before it actually matures into habitat for a different species. So we thought that the 3-to-1 mitigation ratio was completely reasonable.

HEARING OFFICER WEBSTER-HAWKINS: Thank you.

COMMISSIONER MCALLISTER: Thanks for that.

So I think -- well, before, I want to hear from CDFW, and then possibly the county, not to put, you know, either of you on the spot here, but certainly CDFW is sort of a backup resource informationally, and the county, I'm just interested in the county's perspective on sort of more broadly impacts and sort of what the context is here in terms of, you know, available land to use for offsets or sort of cumulative impacts, small c, small i kind of thing.

So I think the math is that we basically have roughly a 2-to-1 difference from about 300 to 633. So anyway, I'd love to hear CDFW's sort of view on the ratio.

MR. POHLMAN: Yeah, thank you, Commissioner. You know, certainly CDFW supports CEC's biological rationale in their mitigation determination. And, you know, I think Chris and CEC Staff, you know, really provided a good, you know, background justification as to why, you know, the impacts, particularly to CESA-listed species, including Crotch's bumble bee and Western Burrowing Owl, you know, why those impacts are, you know, are certainly in high-quality habitat and are going to result in, you know, a highly degraded site.

And, you know, really, in order to fully mitigate under CESA, you know, there needed -- the mitigation amount is certainly appropriate and reasonable.

HEARING OFFICER WEBSTER-HAWKINS: If I could ask you to elaborate on that? Because I'm thinking of the informed comments that we heard earlier from the county comparing some of the mitigation acreage to other renewable energy projects in the region. Is there something unique about this project and the manner of the impacts? And I'm thinking, well, permanent, but also the temporary impacts that may compel a mitigation ratio that's higher than current, say, comparable projects, solar, wind.

MR. POHLMAN: Yeah, great question. So, you know, I'd like to start by saying, right, like we evaluate what's necessary to fully mitigate under CESA on a case-by-case basis, so it's very much project-specific.

HEARING OFFICER WEBSTER-HAWKINS: Mm-hmm.

MR. POHLMAN: You know, there's a couple of questions you asked there, one related to temporary impacts. And, you know, certainly when we're dealing with vegetation in the desert and dealing with desert communities, you know, even though the impacts associated with construction, while they may last five years and include, you know, multiple, you know, seasons of both night work and/or blasting activities, you know, those impacts aren't going to be restored within any short period of time.

You know, generally, you know, the Department considers temporary impacts under CESA to be, you know, something that would be restored within a couple -- or you know, a short period of time. You know, depends very much on the habitat, the impacts, the species that we're considering, but, you know, certainly that the impacts would be of a short duration.

And I, you know, concur with CEC Staff's assessment where that is not going to be the case here. You know, the impacts of the desertscrub vegetation is

going to take decades in order to fully restore and return to a natural state. You know, in addition, you know, there's things like biotic crust in the desert, you know, again, compaction of soils, destruction of burrows, you know, all of that wouldn't be expected to be restored in a short period of time.

And, you know, going back, I guess, real fast to the question pertaining to, you know, appropriate mitigation amount, again, it's very much on a case-by-case basis. CDFW supports Staff's assessment on this.

Again, you know, the impacts to high-quality habitat, you know, the duration of those impacts, also the duration of the project and the take coverage that would be obtained by the Applicant for the project would be, you know, the life and duration of that project, which would not only span construction, but also operations. So there could be the, you know, likely incidental take of those species over, you know, again, multiple decades.

So I'll stop there and see if there's any additional questions. And, also, it looks like Chris may have some.

COMMISSIONER GALLARDO: Before moving forward, I want to remind everyone to identify themselves, just so we have an accurate records. I believe you're Jeremy; correct?

MR. POHLMAN: Apologies. Yes, Jeremy Pohlman, 1 2 yeah, Senior Environmental Scientist Supervisor with CDFW. 3 COMMISSIONER GALLARDO: Excellent. 4 HEARING OFFICER WEBSTER-HAWKINS: Did you have 5 any questions, Commissioner, of Mr. Pohlman on the 6 mitigation acreage? 7 COMMISSIONER GALLARDO: No. I have a question on this topic, but not here. 8 9 HEARING OFFICER WEBSTER-HAWKINS: Okay, so 10 staying with mitigation acreage, I'm seeing the staff 11 wanting to weigh in. 12 MR. HUNTLEY: Hi, Chris Huntley here. I wanted 13 to make sure we responded to one of your questions about 14 Kern County's previous mitigation ratios for other 15 projects. 16 Kern County, as a lead agency under CEQA, has 17 great flexibility in what they determine to be a 18 significant impact, what they feel is appropriate for 19 mitigation ratios. When we looked at some of the 20 information provided to Applicant on that topic, they 21 didn't provide information as to habitat quality, what they 22 were really impacting. What they also didn't identify, was 23 a CESA permit required? So was there a higher mitigation 24 standard? 25 Mitigating to a level less than significant under

CEQA is different than meeting the full mitigation standard required under CESA. And that's what we were trying to do in the FSA, because we have CESA species on the project site, and then the Applicant elected to seek take coverage for Burrowing Owl to ensure that there are no construction delays should show up on their project site.

So our mitigation measures, our mitigation ratios are meant to meet that fully mitigate standard. I hope I answered that sufficient.

10 HEARING OFFICER WEBSTER-HAWKINS: Thank you.

11 Yes.

So I'd like to afford Applicant's expert, Mr.

13 | Stein --

MR. CRAWFORD: No, this is Scott Crawford.

HEARING OFFICER WEBSTER-HAWKINS: Mr. Crawford,

16 thank you.

MR. CRAWFORD: Yeah, I was just going to kind of talk about that habitat component. There were no Burrowing Owls identified on the project site. There were no Burrowing Owls identified in the additional workspace areas. The one that we saw was one-time foraging in the buffer zone. So when we do Burrowing Owl surveys, we have to include a 500-foot buffer zone on top of the construction footprint. So that was the one-time survey that we saw one owl foraging in the area.

But if you look at the habitat components of the project site, where we saw that owl is where the Joshua trees ended. So they're not in a Joshua tree populated habitat. Their population is found in more open scrub habitat. This is a Burrowing Owl, so it lives in the ground. So if you have large vegetation coverage and Joshua trees blocking their view from predators, they're not likely to forage there or nest there.

So we have done other surveys in the area and we've come to the same conclusion that in areas that have more Joshua tree individuals is less likely to have Burrowing Owls. So that was one of the reasons that we had felt that a 3-to-1 mitigation ratio was above and beyond what was reasonable because we didn't have owls actually on site.

HEARING OFFICER WEBSTER-HAWKINS: Mm-hmm.

MR. CRAWFORD: Sort of similar, but with Crotch's bumble bee, we did have foraging bees on site. You do have to keep in mind that we came off of two way above average rain seasons, you know, a super bloom back to back years. And then years previously to that, where other consultant firms had done surveys in the area, you know, they didn't find *Phacelia* plants, they didn't find host plants.

So a lot of the data is, you know, a snapshot in time. And so we just happened to have a really good

snapshot in time.

We didn't have any hives. The nectar sources that are generally recommended or recognized for the species, *Phacelia* was really the only one that we had. And we had quite a bit of *Phacelia* in the areas, but the actual footprint of the site where the main impacts are had just a few kind of here in their patches, but we didn't have any observations on that actual site. Most of those were up in the P2 additional workspace, P2 North.

And so we just want to make sure that you guys have an understanding of, you know, what the onsite conditions are, what the habitats are, and why. I mean, normally, if we would have occupied burrows on a project site, we would assume a 3-to-1 would be a reasonable mitigation. I don't think stepping down to 2-to-1 is unreasonable, considering that we didn't have specific burrows on site or evidence of Burrowing Owl anywhere in the project site or the impact area.

HEARING OFFICER WEBSTER-HAWKINS: Thank you for that.

MR. HUNTLEY: May Staff respond to that?

HEARING OFFICER WEBSTER-HAWKINS: Yes.

MR. HUNTLEY: Thank you.

HEARING OFFICER WEBSTER-HAWKINS: Yes.

MR. HUNTLEY: As regards to Burrowing Owl, there

is habitat for Burrowing Owl on the project site. And while Burrowing Owls may use more densely wooded areas less frequently than more open locations, there's nothing inappropriate or unsuitable for Burrowing Owls on that project site. We've all surveyed across the Mojave Desert and seen Burrowing Owls in a wide range of vegetation communities ranging from denser than we would have thought to, you know, pretty barren areas where we still have some good owls.

So on that topic, the Applicant assumed take. They wanted take coverage should an owl show up. If they're doing clearing and owls start showing up, they would have no mechanism to, you know, prevent take. The project could likely have some hiccups as they go through the process. And they wouldn't have necessarily a mechanism to excavate or relocate Burrowing Owls should they occur on a project site.

As far as bees, we said and I think we described in our FSA and our opening testimony that uses of habitat by bees is going to ebb and flow based on the amount of rainfall that occurs and the kind of plant expression that happens. And their surveys did correspond to a wet year, and they had, what, 7 queens and 20, 30, 40 worker bees flying all over the place. So the bees are there.

They did not detect any burrow -- or pardon me,

any nests, but that doesn't surprise us. It's very difficult to find nests. You know, in all the surveys we've done, literally we've run into one, and it was almost, you know, dumb luck. We just happened to be in the right space when we saw a number of bees coming out of the ground early in the morning. It's not an easy thing to find.

There's suitable foraging habitat on the project site, and they're not restricted to *Phacelia* plants.

They're generalist foragers. They'll forage on salvia and *Eriogonum* and other species, but like any animal, they're going to feed on the best available food as it goes through the season.

So again, we have those animals on the project site now. They could very well be nesting or overwintering on the project site, and so we're providing a take mechanism for the loss of those species should they be present.

HEARING OFFICER WEBSTER-HAWKINS: Great. Thank you.

So we've heard a lot of really good testimony on this. I do want to give the parties a chance to ask questions of the experts, and please try to avoid duplicative or questions that might elicit duplicative information.

1 COMMISSIONER GALLARDO: I actually had a 2 question. 3 HEARING OFFICER WEBSTER-HAWKINS: Oh, thank you. 4 Go for it. 5 COMMISSIONER GALLARDO: Is that okay? HEARING OFFICER WEBSTER-HAWKINS: Yes, please. 6 7 COMMISSIONER GALLARDO: Thank you. 8 I have a question for the Applicant. So on what 9 we've been discussing here, I would like to hear more context. For example, you know, all these differences, how 10 11 do they impact the functioning of the project or even more 12 generally the success of the project? That would be really 13 helpful. 14 MS. LEES: Yes, Laurel Lees. Thank you for that 15 question. 16 The facility itself is cited on the 88.8 acres 17 that you see there. That is a portion of the parcel that 18 could be developed for the facility to function, but we've 19 been able to condense the efficiency and effectiveness of 20 the facility to operate 500 megawatts on 88.8 acres. 21 that is an avoidance measure that we incorporated by 22 So our project design feature as proposed, a 500-23 megawatt facility can function on an 88.8 acre site. 24 The reason why we included the optional 25 architectural berm is simply that we cannot predict the

future when it comes to cavern rock offtake and we wanted optionality. Now the likelihood of building that berm is low because it's permanent impacts and we want to avoid permanent impacts if possible.

We do, as in our project description, have listed three potential offtakers, one of which has been supported by Kern County due to the regional economic benefits of reusing that cavern rock in the concrete aggregate market and realize sales tax benefits in the region instead of creating an additional permanent footprint, so the facility can operate as it needs without the architectural berm.

The transmission line preferred pathway, there's a corridor that we analyzed, that needs to happen.

Absolutely need to have a transmission line interconnection into Southern California Edison Whirlwind Substation, and we do have 500 megawatts of deliverability there. So that 19-mile approximate transmission line is the pathway.

But as part of avoidance, we worked with the resource agencies and CEC Staff and our engineers to move the poles to avoid Western Joshua trees, as well as potential jurisdictional water features that were identified in our Delineation Report, which is a common practice as part of avoidance and minimization. So the actual need, the permanent need for a project 500 megawatts to meet our objectives is the WRESC site itself and the

transmission line.

Now the temporary construction laydown that is needed to build that 500 megawatts, we have more than enough, lots of it. And the reason why we have lots of it is because of that berm. So if we don't have the berm then we don't impact all that temporary acreage and we can do more avoidance, more minimization measures.

To that end, we did a significant number of surveys and walked, you know, hand in hand on the project site and are working to avoid as much of the resources as we possibly can, hence our proposal to mitigate for actual impacts.

HEARING OFFICER WEBSTER-HAWKINS: Thank you.

MS. LEES: I'm sorry, I had one more point that was new and unique is that this habitat is not high-quality habitat, and that's been said a couple different times.

And I just wanted to reiterate that there's no evidence on the record that says it is high-quality habitat.

COMMISSIONER MCALLISTER: Did Staff or Intervenor want to respond to that high quality point?

MR. HUNTLEY: Chris Huntley.

Staff disagrees with the Applicant on the habitat quality on the project site. It's clearly being used by bees, it clearly can support bees, and it's certainly burrowing habitat. It may not be as high quality as other

areas but it's suitable habitat. It can be occupied.

One other point is just non-disturbance buffers for Burrowing Owl right now, because of their CESA candidacy, are 500 meters, so that's 1500, 1600 feet. That's well outside of an area. If an owl was to be detected in that location, the Applicant now has a mechanism to continue working with reduced buffers and things of that nature which they may not have if they didn't seek to take coverage for the owls.

HEARING OFFICER WEBSTER-HAWKINS: And just to elaborate on that, I thought I heard Mr. Pohlman refer to the site as high quality habitat. Could you elaborate on the methodology or analysis or criterion you might use to describe it as such?

MR. POHLMAN: Yeah, certainly, Hearing Officer. Thank you.

You know, so I want to make sure to mention, right, the habitats we're discussing for this project site are native desertscrub communities. It's not, you know, degraded farmland, you know, it's not agricultural lands. There are nice mature creosote scrub, all-scale scrub, obviously Josh tree woodland. These are native habitats. And the species are certainly there, as indicated by the survey efforts, you know, that were conducted by the Applicant. I think Chris and Staff have done a good job,

you know, explaining why it's highly suitable habitat for western Burrowing Owl.

I would kind of like to add to the crotch's bumble bee discussion. You know, they documented multiple queens and many, many worker bees. And so, you know, we did have our expert bumble bee biologist actually provide written testimony on this project, this was several years ago, and have been coordinating with them throughout this process. And, you know, if they certainly think if there's that number of individuals, there's very clearly nesting going on nearby. It could be within the project site or the direct vicinity. And because nests are so hard to detect, you know, there is a very real possibility that those nests were just not detected during surveys.

COMMISSIONER MCALLISTER: Okay, that's super interesting. So I'm a beekeeper, so I'm very interested in this. Obviously, you know, Italian bees, et cetera, are not what we're talking about here.

And so I'm kind of curious, do queens roam around looking for nectar in the same way worker bees do for the Crotch's bumble bee? Like you find, in a survey, you would be finding queens out there in the world flying around?

MR. POHLMAN: Yes, great question, Commissioner.

And, you know, again, we coordinated with our bumble bee expert, but to my understanding, yes, you know, queens

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could be foraging around looking for nest sites --
 1
 2
              COMMISSIONER MCALLISTER: Oh, right.
 3
              MR. POHLMAN: -- during certain times of the
 4
    season. Or, again, when the nest is senesced and towards
 5
    the end of the season, they could also be looking for areas
    to overwinter.
 6
 7
              COMMISSIONER MCALLISTER: Oh, interesting. Okay.
 8
              MR. POHLMAN: Yeah, so there actually is the
9
    potential, you know, during project activities that they
10
    could come across an overwintering queen.
              COMMISSIONER MCALLISTER: Oh, interesting. Okay.
11
12
    Okay, cool. That makes sense. Thank you.
13
              HEARING OFFICER WEBSTER-HAWKINS:
                                                 So I am
14
    cognizant --
15
              MS. ANDERSON: So Hearing Officer --
16
              COMMISSIONER MCALLISTER: Oh, yes, go ahead.
17
              HEARING OFFICER WEBSTER-HAWKINS:
18
              MS. ANDERSON: Hearing Officer, I'd just like --
19
    this is Ileene Anderson, and I'd just like to weigh in, as
20
    well, on this quality -- habitat quality issue.
21
              And, you know, Joshua trees, especially at the
22
    number that are on the site, which has been our focus,
23
    definitely suggests that the habitat quality is good desert
24
    Joshua tree habitat out there to support a variety of
25
    different species, which we haven't commented on, but it's
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1 definitely, you know, good Joshua tree habitat out there, 2 creosote bush habitat. So, yes, I think it's high quality 3 as well. 4 HEARING OFFICER WEBSTER-HAWKINS: Thank you for 5 that, Ms. Anderson. 6 What I'm cognizant of right now is that we still 7 have the parties. 8 COMMISSIONER MCALLISTER: Yeah. 9 HEARING OFFICER WEBSTER-HAWKINS: They need an 10 opportunity to question the panels on this expert witness 11 panel, and any follow-up questions that the Committee may 12 have. We also would like to hear from the county. We need to take a break. We've been at this now 13 14 for three hours. And I don't see all of this questioning 15 and good discussion wrapping up in the next 10 minutes. So 16 I would propose that we take lunch and resume with the

CDFW, if you're able to stay, we'd greatly appreciate it.

We're going to take a 45-minute lunch and stretch our legs, okay? Thank you all. We will be coming back, let's see, 45, 1:07, is that 1:52? Let's say 1:55. We'll start before 2:00. 1:55 is good. Thank you.

cross-examination of the witnesses for the questions of the

(Off the record at 1:07 p.m.)

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agency.

(On the record at 1:59 p.m.)

HEARING OFFICER WEBSTER-HAWKINS: Good afternoon. Welcome back from lunch, and we're going to pick up where we left off, which is we have the Biological Resources Panel and experts still with us. We have our agency representative from CDFW, and we're going to now begin the party's questions of the experts.

Just as a reminder, the parties can ask their own experts clarifying questions. They can ask the other party's experts clarifying questions if you're going to rely on a document, such as their testimony or something they've relied upon, please be sure that you've identified the exhibit and page number if appropriate.

So we're going to begin with the Applicant.

MR. HARRIS: Yeah. Now let's see what this way it goes here. Okay. If you're ready, Hearing Officer, I think I found the volume generally, so I was going to pull anybody's head off here after lunch.

A couple of things. I'm going to go back through and clarify a couple of things. There was a statement I think at the other end of the table about western Joshua tree woodlands on site, and I think that's incorrect, but I'd like to ask the question.

Are there western Joshua tree woodlands on the 88-acre project site?

1 That's for --HEARING OFFICER WEBSTER-HAWKINS: Are you 2 3 directing that question to staff? MR. HARRIS: Let's see. 4 5 HEARING OFFICER WEBSTER-HAWKINS: -- cross witness? 6 7 MR. HARRIS: I was kind of directing it towards mine, but I don't mind Chris answering. 8 9 Go ahead --10 HEARING OFFICER WEBSTER-HAWKINS: Yeah. If you 11 can identify the name of the witness when you're -- that 12 would be helpful. 13 MR. HARRIS: I'm going to go with Mr. Crawford. 14 I don't want to put Chris on the spot. I think I know what 15 Chris's answer is, and I would like it, but can we pass the 16 microphone down to Mr. Crawford, please? 17 Thank you, Mr. Huntley. 18 MR. CRAWFORD: Yeah. This is Scott Crawford. 19 I think the question was do we have western 20 Joshua tree woodlands on the physical project site? 21 the answer is no. 22 And I think that was based on a comment that 23 Jeremy Pohlman had made when he was kind of generally 24 characterizing the habitat on site with regard to a high-25 quality habitat, and he had mentioned that it was a western

1 Joshua tree on site, indicating that it was a higher 2 quality of habitat. 3 MR. HARRIS: Okay. So not located on the 88-acre 4 site, but okay, thank you. 5 MR. CRAWFORD: Correct. MR. HARRIS: I want to turn back to bees for a 6 7 minute, and maybe Kate can help me with this one. 8 There was a lot of numbers thrown around about queens and where bees were found and that kind of stuff. 9 10 Can you take us through what you actually found, 11 where those bees were located, please? 12 MS. MOSS: Yes. Thanks. 13 I think it would be helpful to pull up TN number 14 -- oh, sorry, Exhibit 1149 so we can visualize what we're 15 talking about when we talk about Crotch's bumble bee 16 habitat and observations. 17 HEARING OFFICER WEBSTER-HAWKINS: And this would 18 be the Willow Rock incident dental take permit? 19 MS. MOSS: That's correct. 20 HEARING OFFICER WEBSTER-HAWKINS: And while staff 21 is locating that, is there a particular page or section? 22 MS. MOSS: There is. It's page 25. There should 23 be a map series towards the end of the application. 24 MR. HARRIS: The PDF page. 25 HEARING OFFICER WEBSTER-HAWKINS: PDF page.

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1
    Right. Okay. Thank you.
 2
              Looks like the maps begin on 23, and you're
 3
    directing us and our attention to page 25, which is the
 4
    Crotch's bumble bee habitat and observations map?
 5
              MS. MOSS: That's correct.
              HEARING OFFICER WEBSTER-HAWKINS: So it would be
 6
 7
    the paginated -- the PDF page is located.
 8
              MR. HARRIS: That's not the correct exhibit, I
9
    don't believe.
10
              HEARING OFFICER WEBSTER-HAWKINS:
11
              MR. HARRIS: Exhibit 1149.
12
              HEARING OFFICER WEBSTER-HAWKINS:
                                                 1149?
13
              MR. HARRIS: 1149.
14
              And then PDF page 25.
15
              MS. MOSS: So you can stop right there.
16
              So there's a map series here that we developed
17
    based on field data, and to provide a little bit of
18
    context, when the crews conduct these surveys, they do two
19
    functions. They survey the area and they document suitable
20
    habitat, so forage species, and they also document
21
    observations of the bees themselves.
              So we have two pieces of information here, which
22
23
    is the pink is Phacelia.
24
              MR. HARRIS: Kate, can I interrupt you for a
25
    second?
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Can you orient people about where the 88 acres is in this particular exhibit?

MS. MOSS: Absolutely. Yes.

The 88 acres is at the bottom part of this screen. So what we're looking at here is -- yeah. The gray or dark green shading is the actual Willow Rock Facility footprint. The lighter green shading is a combination of P1, P2. And then you can see the gen-tie off towards the left-hand side of the image.

So what's shown on this screen is the pink, which is *Phacelia*, as I said. And the reason why we're showing specifically *Phacelia* is that was the forage species that was predominantly found, and where the bees were observed. So while they do forage on other species, those were not documented in the density that *Phacelia* was.

The other thing that's shown on this image is -it's a little bit difficult to see, but right in the middle
of that pink patch there is a red dot. That is an
observation of a queen. There's another one off the
project site, so north of the project site there, you can
see another red dot. That's another queen.

So while we hear that there were multiple bees observed in the Project as part of the surveys, they were, but the majority of them were observed on the gen-tie line, not in the Project permanent or temporarily impacted areas.

If you're able to scroll to the next image, this shows the southern area of the project footprint. So again, the dark green is the permanent loss. And then the southern part shows some of those temporarily impacted areas. And again, you can see that there's a patch of Phacelia. And there's one -- and this one is orange in color, so it's actually a worker bee, that was observed in that patch. There weren't bees observed on the actual project footprint. It was within the temporary areas.

HEARING OFFICER WEBSTER-HAWKINS: And can you also just orient us. You referred to WR, P1, P2 north and P2 south. I don't know that everyone in the room knows exactly where those sites are or those areas. Just so we know that -- where you're referencing when you made that reference.

MS. MOSS: Right. Sorry.

So the dark green area that's the WRESC site we refer to it as, which is the actual Willow Rock Facility. We refer to P1, P2, I think we refer to those P2 north and P2 south as the temporarily impacted areas. So those are areas that would either become part of the rock berm in that scenario or would be temporarily used for laydown.

And that's represented by all the light green.

HEARING OFFICER WEBSTER-HAWKINS: All the light green is either P1 or P2.

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1
              MS. MOSS:
                         That's right.
 2
              HEARING OFFICER WEBSTER-HAWKINS: All right.
                         That's right. The very light shading,
 3
              MS. MOSS:
 4
    I realize that there's multiple shadings of green on this,
 5
    so it's slightly complicated, but the lighter shade of
 6
    green.
 7
              HEARING OFFICER WEBSTER-HAWKINS:
                                                 Right.
                                                         Thank
 8
          Good.
    vou.
9
              MR. HARRIS: Can we roll back to the prior image
10
    too?
          For my next question.
11
              Just back one page.
12
              MS. MOSS:
                         Yeah.
13
              MR. HARRIS: Yeah.
                                   If we could go back one page
14
    on the same exhibit to the first one. Yeah.
                                                   There we go.
15
              Okay. So Kate, so two queens total and both off
16
    of the main project site; is that correct?
17
              MS. MOSS:
                         Two queens total in this area.
18
    were additional queens observed along the gen-tie routes,
19
    mostly along the optional routes.
20
              MR. HARRIS: Okay. So the other five that were
21
    referenced earlier, not anywhere seen here, they'd be on
    the gen-tie line, the 19-mile gen-tie line, the whirlwind;
22
23
    is that correct?
24
              MS. MOSS:
                         That's correct.
25
              MR. HARRIS: I want to ask now, Scott Crawford,
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about survey areas. There's a sort of suggestion that there's a lot of holes in our survey territories.

Can you actually identify the specificity where the surveys were formed and where those, you know, quote-unquote unsurveyed areas are on this map?

MR. CRAWFORD: Sure. Scott Crawford.

When we did the field surveys and we had split those up into 2023-2024, we were working with Cody to provide which parcels we had access to, which ones we don't.

When we completed the surveys, there were 8 parcels total that we were not allowed access to. So let me first state that we had complete access over 100 percent of the WRESC project site, the P1, the P2 north, P2 south, and the entire preferred route of the gen-tie line.

What we did not have access to along the gen-tie line was one parcel in one of the options -- I'll make sure I get it right -- and it's the option that goes to the furthest north, and then it's kind of the western corner of that option was the only area that was in an actual alternative project buildable footprint. All of the other parcels were in buffer areas outside of the right-of-way that we were doing surveys.

So I just want to make sure -- is that clear enough?

MR. HARRIS: Well, it was left and right, east and west.

So on this map, there's on the left-hand side, which is the west, I guess, there's a little jog up and down. And that's an alternative route, and that's the area you were not able to access?

MR. CRAWFORD: No. No. That's not one of them.

MR. HARRIS: Okay. I'm sorry.

MR. CRAWFORD: Yeah, if you scroll down -- well, I think it's actually -- might not be on this map. So there is a parcel between the P1 additional workspace and the highway, but those weren't areas that we were conducting the protocol surveys in, and I think it's probably one of the unshaded green areas.

But if you go to the next -- it's probably the second or third one down, that was all surveyable. I don't know how far over the -- okay. So this is perfect.

You can see in the upper left corner or the northwest corner of that alternative that goes up to the north and comes back down. There's a green shaded area with some *Phacelia* in it. The property just south of that was an area that we did not have access to.

MR. HARRIS: But again, that's on one of the optional routes and route options. But you were able to put boots on the ground on all the preferred routes.

1 MR. CRAWFORD: Correct. 2 MR. HARRIS: Is that correct? 3 MR. CRAWFORD: Correct. That's correct. 4 MR. HARRIS: All right. Thank you. I had a 5 clean record until I asked one more question, so I 6 apologize for messing you up. I maybe need more lunch than 7 I had. 8 I want to talk to you about the ITP process now. 9 If you're the best person, Scott, or you -- can someone 10 else on the panel. There's a lot made about us seeking ITP 11 coverage and seeking take coverage. 12 Can you give a little more history about that 13 ITP-like filing and how that all evolved? 14 MS. LEES: Is it okay? 15 MR. HARRIS: Sure. Go for it. 16 MS. LEES: Laurel Lees. 17 The discovery period during which we did data 18 requests and responses to data requests, during that time 19 period in October, the burrowing owl was listed, and after 20 the close of discovery, which closed January 13th, we were 21 working towards helping staff work towards a preliminary 22 staff assessment, and it was given to us as an option to 23 speed things up if we were to file an ITP. 24 And there are two separate processes. You know, 25 we're not filing an ITP and getting CDFW to approve that,

1 which normally in CEQA land happens after a CEQA EIR is 2 certified or an MND is adopted. And in this process, 3 because CEC is a one-stop shop, we submitted an ITP form so 4 that we had information that they were asking for. 5 So it was a post-discovery information request 6 out of good faith to move things along. As we're all very 7 aware schedule is a high priority. So we filed that out of due diligence and being overly conservative. 8 9 HEARING OFFICER WEBSTER-HAWKINS: May I ask what 10 species that submittal was based on? 11 MS. LEES: Burrowing Owl and Crotch's bumble bee. 12 MR. HARRIS: Let me go back to Scott. 13 Can you compare that process, you know, in a non-14 Energy Commission siting context versus this context? 15 MR. CRAWFORD: So normally when we -- normally we 16 usually start with our protocol surveys. 17 In fact, if you can go up a couple slides just 18 for reference. One more. There you go. 19 One more back. No. 20 MR. HARRIS: Back to PDF page 25 --21 MR. CRAWFORD: Yeah. That one. 22 MR. HARRIS: for the transcript. MR. CRAWFORD: So I know we kind of talked about 23 24 the burrowing owl location. So normally we start with our 25 protocol surveys. If we do not have burrowing owl on the

project site, then we don't have further mitigation. The complicated part now is because of the candidacy we have to treat it as endangered species.

So normally we wouldn't ask for an ITP. We would just have construction monitors and we would write a plan that if we found one, we would do X, Y, and Z. So that's pretty standard. With the ITP, normally what happens is we're looking for what's the mitigation to offset those impacts so we could have take consideration.

So what our thought process was moving forward with the way that they filed the ITP was, you know, we were looking at the impacts. We'll start with Crotch's bumble bee, where the *Phacelia* was. So reasonably, that's going to be impacted. That's where our mitigation would land under the ITP because that's where the take would occur.

So similarly with burrowing owl, we would probably use the same type of area knowing that the burrowing owl that we did surveys were not in the project site footprint but within that buffer zone. And so it's kind of a different analogy, kind of a time constraint.

But normally we would do an ITP if we have presence, which we do. We know we have burrowing owl and Crotch's bumble bee either on the project site or in the vicinity, which is one of the reasons we moved forward with the ITP. The other way to use an ITP is if you don't have

time to do surveys and you assume occupancy of the entire, you know, project site.

But I think one of the things that we wanted to make sure that you guys understand is when we're looking at what the mitigation looks like, it's not just the whole project site. We haven't had a final design where all of P1 and all of P2 are all going to be impacted. So if we have a non-berm scenario, then we avoid all of P2. And so to have an ITP where we consider all of those as impacts, we may not be impacting.

And so I think that's where we were struggling with, is that final 3-to-1 on a thing that impacts everything seemed a little bit more than necessary. And so I think what we were looking for is, you know, a compromise, was if we were going to take all of the acreage, then maybe we do a 2-1 for permanent and a 1-to-1 considering all the project impacts without looking at avoidance and minimization measures.

HEARING OFFICER WEBSTER-HAWKINS: Okay.

MR. CRAWFORD: Is that good?

MR. HARRIS: No. Yeah. That's good.

And then I guess one more thing. We've talked a lot about actual impact areas, right? So whoever's appropriate on the panel to answer the question, how will we be able to verify once we start construction how much

1 we're actually impacting? Because Laurel talked about 2 trying to avoid areas, for example, and not impacting them. 3 I know there's photography involved and that kind of stuff. 4 Can you explain that process to confirm what the 5 actual impacts and the actual acreages would be? MR. CRAWFORD: Oh. Yeah. Absolutely. 6 7 So normally what we would do is we would fly a 8 pre-construction, whether a drone or aerial photo. 9 have the existing conditions immediately prior to construction and then we would be monitoring that 10 11 throughout the course of the project. So you know, midway 12 through the project we're going to be documenting are they 13 going outside of their limits, on top of having the field 14 staff that are already looking at that. 15 And then on conclusion, we have a final flyover 16 that we're -- we look at what has actually been impacted in 17 having that calculation. 18 MS. MOSS: Sorry. Can I just add to that? also believe that that is one of the conditions of the 19 20 project that's in the staff assessment. 21 MR. CRAWFORD: Yeah. 22 MR. HARRIS: I have one more question for you, 23 Kate and then I think I'm wearing out my welcome. 24 So I want to ask you about habitat quality. That

came up quite a few times. And just can you speak

25

generally about what kind of things go into your determination of habitat quality and how that affects your selection of ratios?

MS. MOSS: Yes. Thanks. Habitat quality is something that can be difficult to talk about because we use terms like quality, non-quality, suitable, high, low, medium. And it's difficult without having a set criteria that defines those terms to speak apples to apples.

So the sort of things that are typically considered when we think about habitat quality for a species is, where would the species in a perfect world want to live? That's high-quality habitat. So it's an area that hasn't been disturbed that meets the natural requirements of that species. And then there's sort of a gradation from there. And that certainly doesn't mean that a species will occur or will not occur outside of high-quality habitat. They do. They occur in moderate-quality and in low-quality habitat. So they can occur in other habitats. And we don't dispute that this project provides habitat.

The changes that we need to acknowledge on this site that have occurred is that it's situated between two highways, so that's a disturbance that creates noise and light. It creates mortality risk for animals, and it makes it difficult for animals to move on and off the site.

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There's a rail line that also creates noise. There's been
 1
 2
    years of people dumping garbage on the site, so that's
 3
    disturbed the habitat, and there's also off-road driving
 4
    that has modified the habitat.
 5
              Again, this doesn't mean that this is not
    suitable habitat for wildlife species. It just affects
 6
 7
    that definition of quality.
              HEARING OFFICER WEBSTER-HAWKINS:
 8
                                                 Thank vou.
9
              Applicant, do you have any questions of the other
    party's witnesses?
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11
              MR. HARRIS: No.
                                We don't.
12
              HEARING OFFICER WEBSTER-HAWKINS:
13
              MR. HARRIS: Thank you for allowing us to do
14
    this.
           Thank you.
15
              HEARING OFFICER WEBSTER-HAWKINS:
                                                 Thank you.
16
              Staff? Opportunity to ask questions of -- I'll
17
    ask Mr. Babula to lead the questioning.
18
              MR. BABULA: Okay. Thank you. This is Jared
19
    Babula, Staff Counsel.
20
              So I'll start with my -- Mr. Chris Huntley.
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              Mr. Huntley, is staff seeking to have sections of
22
    the site that aren't going to be impacted, mitigated?
23
              MR. HUNTLEY: No, sir.
24
              MR. BABULA: Would you like to respond to some of
25
    the information and responses you just heard from the
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Applicant?

MR. HUNTLEY: Yes. That would be great. Thank you. I took some notes and I may have to go back to a point if I overlook it.

A couple important factors. What do surveys tell us? What do even protocol-level surveys tell us?

Protocol-level surveys are a tool we use to find the best opportunity to detect a rare or sensitive species on a project site, and they've generally been designed to give you a reasonably good chance of detecting them, but not 100 percent. We can do protocol-level surveys for bees on a project site, find nothing, show up next month, and there's a bee there, and we see the same thing with desert tortoise and other things. Even utilizing protocols with experts, we overlook 40 percent of the tortoises that are on a project site and overlook the vast majority of sub-adults or hatchlings. They're just not readily available.

When we look and when we talk about bees on the project site, we are analyzing the entire project as a whole. We're not analyzing the RESc project site or P1 or part of the gen-tie line. We analyze the project as a whole and we're providing compensatory mitigation and CISA coverage to the project as a whole. And so we acknowledge there's bees all over the different alignment areas.

The fact that bees are in some of these areas

that are being proposed for disturbance, like in the top of that photograph there, doesn't mean they don't occur on the project site, doesn't mean they don't forage on the project site, doesn't mean they're not nesting on the larger energy project site -- WRESC project site.

So it's a good tool. The surveys are obviously detecting bees in the best possible habitat in a perfect world type of situation, but it doesn't preclude their use of the project site. And I would agree with the biologist that if I wanted to find a bee or I wanted to find a veria (phonetic) or something like that, I would want to look in the

best-quality habitats that can give me the highest potential to detect bees. And we're glad that the Applicant went out, did the surveys, and did detect bees.

But there's habitat for bees all over that project site, including foraging habitat. They're not limited to foraging on phacelia. There are other species that we detected in your species list that they would forage. I think there's *Eriogonum* and salvias and things like that which they can certainly forage on at any given time.

I do want to make sure we're clear on this. Berm or no-berm option, we are not going to require you to mitigate for the worst case scenario. I know in one of the

conditions, that's what we did, and I think we're going to have to change that to make sure we include a berm and no-berm option. But the acreages will be taken care of in that option.

We're not going to, I think, allow a true-up for impacts to a CESA species at the end of the project. We would want you to tell us what you're going to impact, which alternative you're going to use, earlier in the process so we don't have a further delay in offsetting impacts to those species.

Let's see.

And again, as far as habitat quality goes, habitat is habitat, and better habitat can support higher numbers of species than lower habitat depending on the forage, the shelter, and other factors, but it's habitat nonetheless.

And as far as the habitat quality on this project site overall, we agree, and we mentioned in our staff assessment, that there's probably no tortoise and probably no Mohave ground squirrel because it's been isolated by the highway and the rail line and Sierra Highway for so many years. But the fact that we have relatively intact habitat with a variety of rare plants, not just Joshua trees, but other rare plants, suggests that the habitat is relatively okay. It is subject to disturbance and dumping and other

things, but that's not precluding use of the site by bees or other species. So again, we have to assume that it's occupied habitat project-wide for the purposes of our CESA construction.

Again, this is not a typical CEQA CDFW process where we would have a CEQA project with a clearly defined project description. Then we would apply for a CESA application with distinct numbers. This is a CEC process, so it's a little bit independent. But we did feel we had to present mitigation to offset impacts to occupied habitat in the FSA.

And with that, I don't know if anyone has any other questions.

MR. BABULA: Thank you. This is Jared again.

I do have a question for the Applicant. I'm not exactly sure which would be best to do this, but can one of you describe the types of equipment and materials that would be placed in the laydown areas, so there's a little bit of some concrete examples of how you're going to plan to use the laydown areas.

MR. STEIN: Can you hear me here? Okay.

In the laydown area, there will be a variety of uses.

So for starters, construction parking. So workers coming to and from the site, whether by bus or by

individual car, would be parking in a designated parking area. There would be material laydown, so the various components of the project that are being constructed need to be stored before they're actually put in place where their ultimate use will be. And then there will be the yellow iron machinery that will be used for grading and for construction, and those will be placed in a laydown or storage area when they're not in use. Those are the primary uses.

And I wanted to take the opportunity, too, to talk about what the -- the difference between -- I mean, we use terms like project site and project area, and I think it's important to understand the distinction between those.

So the dark shaded area there is the WRESC project site. That is where the predominant disturbance for this, for construction of this facility will occur. There will undoubtedly be intensive grading, and the majority of that area will be disturbed.

The green shaded area above it is designated for construction laydown, and then the linear component, the gen-tie line, runs approximately 19 miles over to the Whirlwind Substation.

There will be activity along that gen-tie as the transmission line is being constructed, but the intensity of activity along that corridor is extraordinarily lower

than the intensity of construction activity on the site.

There will be less noise. There will just be less construction in general.

In a way a transmission line is constructed as little mini construction sites when each pole is located along the transmission line. There's micro-siting that's done in coordination with qualified biologists to be sure that resources are avoided, both for biological resources and cultural resources, and then placing those permanent structures. And it's no more than a few days of activity at each one of those locations, then they move on to the next one.

And then once the poles are in place, then the conductor will ultimately get strung on the poles and there will be various little tensioning sites where the conductor is actually attached to the pole and pulled to the appropriate tensioning. So it's a very different level of intensity.

So when we talk about the bees flying all around the project site, I think what this image is showing is that the survey identified an instance of two bees that were off the area where all of the intensive activity is going to be occurring, but possibly in the area of construction laydown. And any other sitings were along the transmission line corridor where the construction activity

is much less intense.

MR. BABULA: So just to follow up then on -- just focusing not on the transmission part but on what was called P1 and P2, can you describe how those four areas would be, like, cleared and grubbed and rocked for stability as part of the project?

MR. STEIN: Yeah. I don't know if I'm the best person on the panel to describe that. I can take a -
MS. LEES: Hi, Laurel Lees.

So in the P1 area, which is the first L-shape around the WRESC site itself, and then P2 north is that block. P2 south is the block below.

If the berm is not constructed and we have all this potential temporary laydown areas, what we would do is identify places to avoid. So we're going to flag, for example, in P2 south, which is — if you want to go to the next figure on the screen, just one map down, there is a block of four — yeah, you see them there with the Phacelia — a block of four parcels there where there is a potential jurisdictional water feature.

So similar to that water feature, areas that we want to avoid would be flagged, flagged for avoidance. So we're not going to park a car in a jurisdictional water feature. We're not going to have a parking lot over a J tree that we can avoid -- excuse me, western Joshua tree

that we can avoid. Pardon me.

And so similarly, when we get -- for example, we don't need to wait until the end of construction to true up our temporary and permanent impacts. We can do that when we have final design. We're going to submit construction drawings and specifications and it will show our delineation of work and where we're going to build, and the type of activity that happens in those areas. So our engineering drawings would be very specific about where our lay down is going to be located, and we would work to avoid, again, as much as possible, avoid Joshua trees, avoid Phacelia, avoid -- if during pre-construction surveys that we're burrowing owl found on site, we would avoid those.

Following the normal pre-construction mitigation measures, we would have a much better understanding before we start construction such as clearing and grubbing -- pardon me, backing up steps -- such as salvage and relocation of Joshua trees, then site clearing and grubbing and mobilization of equipment, that would all be planned for in accordance to site constraints that we would find during pre-construction surveys.

So another way of saying: there's an opportunity post certification pre-construction to identify the actual permanent footprint, and be able to design our lay down to

avoid more resources.

MR. BABULA: Thank you.

So I do -- so on the chart, the table we had up before which is 2.3 in your opening testimony, so that -- those numbers for what you call the temporary disturbances, that would be the max of P1 and P2, but within that, based on what actually happens with whether or not you're going to have the berm -- the actual amount that would be temporarily disturbed, in your parlance -- it could be narrowed because of the -- sort of evolving the way the project will actually be constructed; is that the case?

MS. LEES: That's correct. It would be best practice to avoid and minimize impacts to maximum extent that we could, and we would know more before construction.

MR. BABULA: So let me, if I can, Committee, just go back to Mr. Huntley.

So Mr. Huntley, is there something in our conditions that sort of provides some flexibility to adjust and account for this sort of true-up in a way?

MR. HUNTLEY: We did have some language. I believe it was in one of the Bio 8 or Bio 7. I think that may have been removed.

I believe the mitigation related to bumblebees and owl habitat should be modified to reflect Option 1 and Option 2, and I do think there can be some language in

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1
    there to base the mitigation acreages on the designs
 2
    provided by the Applicant that give us a solid number prior
 3
    to land disturbance for site mobilization, whatever you
 4
    want to call it.
 5
              So I think there can be flexibility built into
 6
    the process.
 7
              MR. BABULA: Thank you.
 8
              Those are all my questions.
9
              HEARING OFFICER WEBSTER-HAWKINS: And just to
10
    clarify -- excuse me, just to clarify, you have no
11
    questions for the Intervenors expert?
12
              MR. BABULA: No. I don't.
13
              HEARING OFFICER WEBSTER-HAWKINS: All right.
14
    Thank you.
15
              Turning to Intervenor, do you have questions of
16
    the experts?
17
                          CROSS-EXAMINATION
18
              MS. GRAVES: Zeynep Graves, counsel for
19
    Intervenor, Center for Biological Diversity.
20
              I just have a couple questions for Applicant's
21
             I'll direct them to Ms. Moss, but if you're not
22
    the right person to answer, then you can pass the mic to
23
    maybe Mr. Crawford.
24
              And if we could pull up 1234. This is
25
    Applicant's rebuttal testimony. It's page six of the PDF,
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1
    paginated as three of the testimony. Page six of the PDF.
 2
              And we'll get to specific questions regarding the
 3
    rebuttal testimony, but kind of preliminarily, Ms. Moss,
 4
    were you responsible for evaluating whether Joshua tree
 5
    Woodland occurred within the Willow Rock project area?
              MS. MOSS: I did a secondary analysis. Scott
 6
 7
    Crawford did an initial analysis.
 8
              MS. GRAVES: Okay. Maybe I can start with Mr.
9
    Crawford then.
10
              So in your initial analysis of Joshua tree
11
    woodland, you relied in part on the California vegetation
12
    map in support of the Desert Renewable Energy Conservation
13
    Plan; is that right
14
              MR. CRAWFORD: That's correct.
15
              MS. GRAVES: And you also conducted field
16
    verification surveys in 2023 and 2024?
17
              MR. CRAWFORD: That's correct.
18
              MS. GRAVES: And the background mapping you
19
    worked from was updated at a 10-acre scale; is that right?
20
              MR. CRAWFORD: That's correct.
21
              MS. GRAVES: Would you agree that the scale might
22
    not always capture smaller areas where Joshua trees occur
23
    in clusters?
24
              MR. CRAWFORD: That's correct.
25
              MS. GRAVES: And did you conduct any field
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1 surveys to look for woodland in areas that had not been 2 identified as woodland during the background data review? 3 MR. CRAWFORD: Yes. 4 MS. GRAVES: And can you describe -- actually, so 5 other than the -- I think this is detailed on that -- the 6 page that we have pulled up in Exhibit 1234. Other than 7 the 74.66-acre western Joshua tree woodland polygon that 8 was identified along the project areas gen-tie Options 2A 9 and 2B, did your team -- you or your team identify any 10 other western Joshua tree polygons? 11 MR. CRAWFORD: No. We did not. 12 MS. GRAVES: Did you attempt to? 13 MR. CRAWFORD: Yes. We did. 14 MS. GRAVES: Okay. Can you describe what you did 15 to attempt to identify any other Joshua tree Polygons? 16 MR. CRAWFORD: Sure. Wo we used the base map as 17 a starting point. We did our field verification to 18 identify areas that we felt may have been missed or weren't 19 classified correctly. There was one Mohave desertscrub 20 area that was in the -- I'll say the P2 North area that did not have creosote bush in it, so we had remapped that to 21 22 burrow bush scrub. 23 We did look at the project site. We do know 24 there is a number of Joshua trees on it. We didn't feel 25 that the 10-acre minimum mapping unit was sufficient, so

1 when we do our veg mapping we do it at a tenth of an acre. 2 So what I had done, which was a separate analysis 3 from what Kate did, was we took about 30 different Joshua 4 trees in different classifications to identify based on an 5 aerial photo and site visits what the canopy cover of the Class A, Class B, and Class C trees were. We took that 6 7 We put a GIS polygon around each of those, and then took a square that was a tenth of an acre and moved it 8 9 around the site to find the biggest cluster of Joshua 10 trees. And at the most Joshua trees that we could find, 11 that number was -- instead of having the 1 percent, it was 12 .6 percent, so it was underneath that 1 percent threshold. 13 MS. GRAVES: And was that exercise documented 14 anywhere in the record? 15 MR. CRAWFORD: It was part of our vegetation 16 mapping. 17 MS. GRAVES: Do you recall, like, either the 18 exhibit number or the TN of that mapping that reflects the 19 polygons that you're talking about? 20 MR. CRAWFORD: It should be on the Biological 21 Resources Assessment, which is the 1043 Exhibit number. 22 MS. GRAVES: And do you recall the size of the 23 polygons that you mapped the Joshua trees at a 0.6 percent 24 density?

We didn't map any of the

MR. CRAWFORD: No.

25

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1
    polygons. We just were looking at anything that would be
 2
    more than that 1 percent.
 3
              MS. GRAVES: So sorry. Just to clarify, you --
 4
    can you repeat what you just said?
 5
              MR. CRAWFORD: We didn't map the areas that were
 6
    under the 1 percent. We were only looking for areas that
 7
    would qualify as a woodland. So if they qualified as a 1
 8
    percent or more, then we would have mapped those as a
9
    polygon. But we didn't find any of those on the project
10
    site.
11
              MS. GRAVES: Right. And does that include P1 and
12
    P2?
13
              MR. CRAWFORD: That's correct.
14
              MS. GRAVES: And what were the -- what was the
15
    size of the areas that you looked at to determine whether
16
    there was less than a 1 percent canopy cover?
              MR. CRAWFORD: Yeah. It was that tenth of an
17
18
    acre mapping unit that we use.
19
              MS. GRAVES: Okay. Thank you.
20
              Okay.
                     Thank you. I don't have any further
21
    questions.
22
              HEARING OFFICER WEBSTER-HAWKINS: Right.
23
    you.
24
              I have some clarifying questions based on
25
    statements that have been made here today, and I think I
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want to first just settle the record.

Mr. Babula, you made a comment about the ITP process and being subsumed under the CEC's jurisdiction, and we also had testimony about the Applicant's intent to frontload the documentation to CDFW for the purpose of reviewing the project for those species.

So I would like to confirm first, from Mr.

Huntley, have you received CDFW's consultation and recommendation for any avoidance, minimization, or mitigation on the three main species we're talking about, which is burrowing owl, Crotch's bumble bee, and western Joshua tree?

MR. HUNTLEY: This is Chris Huntley.

Yes, ma'am. We've been coordinating throughout the entire process to make sure that we're aligned with conditions of certification, and CDFW did provide recommendations as requested by CEC for those species and other species.

HEARING OFFICER WEBSTER-HAWKINS: Thank you.

And then also just to confirm with CDFW, I don't know if you've had a chance to look at the latest either compendium or version of our conditions of certification.

Are you satisfied with the manner in which CEC has reflected your expertise -- your agency's expertise on those three species?

MR. POHLMAN: Yes. Yeah. You know, CDFW certainly supports the rationale and the conditions of certification that are, you know, provided there.

HEARING OFFICER WEBSTER-HAWKINS: Thank you. I wanted to also just acknowledge one of the documents that Intervenor's expert referenced was the Western Joshua Tree Conservation Plan in its draft form, and I believe the Fish and Game Commission adopted the final plan last Thursday.

To your knowledge, is there anything in that final plan that might change your agency's recommendations with regards to the western Joshua tree impacts analysis or mitigation and conservation recommendations?

MR. POHLMAN: That's a great question, Hearing Officer.

Pertaining to the conservation plan, I don't think there would be anything in there that would pertain to, you know, getting take authorization under the Conservation Act, or anything that would conflict with the guidance and recommendations that have been provided to CEC staff.

HEARING OFFICER WEBSTER-HAWKINS: Okay.

MR. POHLMAN: You know, there have been in addition to the conservation plan being finalized, there's certainly been revisions to some of the relocation guidelines associated with the Conservation Act and items

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1
    like that. And we've -- you know, I think CEC staff is
 2
    aware of those revisions and has incorporated them
 3
    appropriately, but I'll defer to CEC staff on that.
 4
              HEARING OFFICER WEBSTER-HAWKINS: Okay. Mr.
 5
    Huntley, do you have any comments on that late action from
    last week?
 6
 7
              MR. HUNTLEY: Yes. Chris Huntley.
 8
              Yes. I do. We do expect some modest changes to
9
    occur, and we built in language to the condition to make
10
    sure if there were future changes to the plan, that it
11
    would be the Western Joshua Tree Plan that the Applicants
12
    needs to submit would be updated to be consistent with any
13
    new quidance.
14
              HEARING OFFICER WEBSTER-HAWKINS: And that would
15
    be under the purview of the DCBO?
16
              MR. HUNTLEY: Yes.
              HEARING OFFICER WEBSTER-HAWKINS: Right. Okay.
17
18
              So post certification?
19
              MR. HUNTLEY: Yes.
20
              HEARING OFFICER WEBSTER-HAWKINS:
                                                 Okay.
                                                        Thank
21
    you.
22
              MR. HARRIS: Sorry, can I -- Mr. Harris.
23
    ask a question?
24
              Is that change in the filing you guys made this
25
    week, or is that forthcoming?
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1 HEARING OFFICER WEBSTER-HAWKINS: It sounds --2 the flexibility or the direction for future adaptations to 3 comport with the plan, is that currently in the CoCs? 4 MR. HUNTLEY: It's currently in the CoCs, Jeff, 5 and I believe it was in the original CoC as well. MR. HARRIS: Okay. Yeah. We're still interested 6 7 in talking with you guys, even after today. HEARING OFFICER WEBSTER-HAWKINS: 8 Thank you for 9 that. 10 I did want to ask staff, is there a map in the 11 record which reflects the observations that you've 12 testified about the seven queens and the 35 workers? 13 there a map that reflects where those observations were 14 made vis-a-vis the project site? 15 MR. HUNTLEY: This is Chris Huntley. We utilized the information provided by the 16 17 Applicant in their survey reports. I don't believe we 18 included it in a separate map associated with the FSA. 19 HEARING OFFICER WEBSTER-HAWKINS: Okav. Thank 20 you. 21 And then my last question has to do with a 22 comment that our counterpart at the county, Ms. Oviatt, 23 made about the availability of mitigation land. This is a 24 general question to staff, Applicant, or intervener. 25 there's anything you want to add in your testimony about

the availability of mitigation land under any ratio, I guess, and how that might impact the mitigation compliance.

MR. HUNTLEY: This is Chris Huntley.

That's a good question. We do know there are mitigation banks in the Antelope Valley. We did change some of the language of the Condition of Certification at the request of the Applicant to provide greater flexibility should they not be able to find land specifically here in the Antelope Valley. But I don't have a clear answer for you as the amount of mitigation lands currently available to support this or other future projects in the region.

HEARING OFFICER WEBSTER-HAWKINS: Intervener, does your expert have any comment on the availability of mitigation lands?

MS. ANDERSON: This is Ileene Anderson.

No. I don't have any concrete idea about the number of acres that are available out there for mitigation.

HEARING OFFICER WEBSTER-HAWKINS: Great. Okay. Thank you for that.

And to our colleagues at CDFW, do you have any comments on the availability of conservation lands in this region and whether or not the added flexibility in our revised CoC from staff? Do you have any comments on that?

MR. POHLMAN: I don't have a comment specifically

for CEC staff's kind of revision in the CoC. In a more, I guess, general response, I mean, there are other projects that are currently being built that are requiring compensatory mitigation that are finding lands in the Mojave Desert.

Certainly, you know, as more lands are set aside for conservation and mitigation, it could be more challenging to, you know, acquire and conserve lands. You know, that could be a consideration, but that's not been a consideration, at least that the department is aware of at this point.

HEARING OFFICER WEBSTER-HAWKINS: Thank you. We did want to provide Ms. Oviatt an opportunity to come forward and also provide similar agency comment that would not be sworn testimony, but based on her professional and informed perspective on any of the mitigation ratio and or impacts and or conservation bank issues we've touched on today.

MS. OVIATT: Thank you. Lorelei Oviatt, Director of Kern County Planning and Natural Resources, representing the Kern County Board of Supervisors.

Without too much trouble, would it be possible to pull up the chart that showed the different acreage?

HEARING OFFICER WEBSTER-HAWKINS: So that would

25 be --

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1
              MS. OVIATT: I think you know. Somebody said it
 2
    was 3. --
 3
              HEARING OFFICER WEBSTER-HAWKINS:
                                                 Yeah.
              MS. OVIATT: What is it?
 4
 5
              HEARING OFFICER WEBSTER-HAWKINS: Ms. Lopez, do
 6
    you have that handy? It's been a popular one today.
 7
              MR. HARRIS: Well, 1233.
              HEARING OFFICER WEBSTER-HAWKINS:
 8
 9
              MR. HARRIS: PDF page 25.
              MS. OVIATT: So while you're pulling that up.
10
11
              MR. HARRIS: Table 2.3.
              MS. OVIATT: 2.3. That was it.
12
13
              MR. HARRIS: It's 2.3 of our opening testimony.
14
              HEARING OFFICER WEBSTER-HAWKINS: And the opening
15
    testimony is 12, which is a bit --
              MR. HARRIS:
16
                           1233.
17
              HEARING OFFICER WEBSTER-HAWKINS: Yeah.
                                                        1233.
18
              MS. NEUMYER: This is Samantha Neumyer.
19
              In PDF page 82.
20
              HEARING OFFICER WEBSTER-HAWKINS:
                                                 Thank you.
21
              MS. OVIATT: Okay. So I appreciate very much.
22
              I think the issue on permanent has been resolved
23
    with the language that is being proposed to distinguish
24
    between things that are actually going to happen and things
25
    that may happen. I'll just say it that way, because if
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they don't build part of the berm, there won't be an impact. So that is not shown on this map.

So I think that, you know, one of our concerns about the permanent -- I want to talk about the temporary a little bit. On this chart, you have undergrounding, for example. We hear the reason they are undergrounding. Kern County insisted that in front of certain homes, I can assure you that they are going to be required to stay within the franchise agreement. That is private property next door. They are not going to be allowed to go into someone's front yard. Yes. There may be something wandering around that person's front yard.

To ask a developer to mitigate for off-site impacts over and over and over again is definitely precedent-setting, and we do not do that on our transmission lines. I think that requiring 3-to-1 in a dirt 60-foot irrevocable Offer of Dedication from the county is what we're concerned about.

And I realize now, as I thought, this is an incorrect presentation. I'm going to blame the Applicant. This should have been broken down by -- the transmission line is going through what I like to call virgin habitat. It's going through habitat, and here's an alignment that's going into the irrevocable Offer of Dedication that the county is giving. I have looked through the entire thing

and not seen that. So obviously, CDFW would not have been able to make that distinction.

I think that requiring 3-to-1 for that is a huge precedence, and it should be 1-to-1. And 1-to-1 takes into account the fact that when you're in the 60-foot, there could be noise or other sorts of things that impact the off-site whatever happens to be there.

But I assure you that this 1.5 acres of underground is in people's front yards. It is not next to habitat. It's next to someone's front yard, in some cases with a mailbox, a front porch, a rose garden, maybe something up on blocks because we're known for that out here in the desert. It comes with a house and a boat. Right?

And so 3-to-1 seems excessive for that.

And I think that is part of our concern that the irrevocable Offer of Dedication, which the franchise will be coming before the Board after you decide what you're going to do with this project if it's approved, and they could provide you that amount, and you could make a determination if it could be less than 3-to-1. So that's one thing we would --

HEARING OFFICER WEBSTER-HAWKINS: Ms. Oviatt, could you clarify, other than the undergrounding, would that --

MS. OVIATT: It would --1 HEARING OFFICER WEBSTER-HAWKINS: -- proposal --2 3 MS. OVIATT: Other portions, yes. 4 HEARING OFFICER WEBSTER-HAWKINS: Other portions 5 of the gen-tie line. MS. OVIATT: 6 Yes. 7 HEARING OFFICER WEBSTER-HAWKINS: So looking at 8 the transmission pole foundation possibly, the construction 9 sites, the pole and tensioning sites maybe? 10 MS. OVIATT: No. 11 HEARING OFFICER WEBSTER-HAWKINS: Or no. 12 MS. OVIATT: It's the actual putting the poles in 13 for the transmission line. 14 HEARING OFFICER WEBSTER-HAWKINS: 15 MS. OVIATT: Not the construction lay down areas. 16 Those are -- you know, we actually just consider those full 17 disturbance and you mitigate for them as if they're gone, 18 and then we hopefully reuse them. In some cases, people 19 have put wind on them. They're already disturbed. 20 solar on them. 21 But we do agree that a construction lay down site 22 is not something that you're going to restore. What you're 23 going to do is stabilize it so that it doesn't have dust, 24 and I'm not clear where -- if this was the Applicant's 25 proposal, that they do all this extensive restoration on

these lay down sites.

I have to be honest, Kern County would not accept that. This is the desert. It's very, very, very hard to restore anything. What we're interested in is that there not be dust coming off that site, and that there's a certain amount.

So I just offer to the Applicant, if you propose that, in order to not have higher mitigation, I understand that's a cost. But it is an ongoing monitoring problem that will be a very difficult monitoring problem for your CEC staff, because we can't count on rain and we can't count on it growing.

So I would just -- I really appreciate this. I didn't want to add any other layers to this. I think you've done a great job in sorting out this issue on the side of a road. But I would say that 3-to-1 in an irrevocable Offer of Dedication on the side of a road to put a power pole in would create a precedence for us. We have thousands of miles of this, and this is something we are familiar with.

And I certainly am available for any questions you may have. But I think you've done a great job of trying to sort it out, and I think this chart needs to be expanded to give them the information that they need.

HEARING OFFICER WEBSTER-HAWKINS: Thank you.

Commissioners, do you have any -- dh. Did you have a comment on the availability of habitat conservation lands?

MS. OVIATT: I think the addition of the Crotch bumble bee is what's causing this. As you can tell, we're all learning about the Crotch bumble bee. Very recent. I'm sure they have a date tattooed on the outside of their notebook. The date when this actually happened is so recent. I'm not aware of anyone who has gone out and created a mitigation bank for the Crotch bumblebee.

The Joshua tree is different. I have developers who have bought 80,000 acres of mitigation land for their solar so that they can go and they can do it. So I just think there needs to be a little bit of sensitivity here to the fact that, you know, the Crotch bumble bee habitat has not been something that -- there is no Antelope Valley mitigation bank that's decided that it's covered.

And as you've pointed out, this is like the Mohave ground squirrel. Just because you can't find it doesn't mean it's not there. And we have struggled for decades with that very issue with the Mohave ground squirrel and we have resolved it. So I just want to caution. The Crotch bumble bee is a very new kind of challenge for determining the mitigation land, and whether the mitigation land given the number of droughts we go

1 through is actually going to be good for the Crotch bumble 2 bee in the future. 3 So that's our -- you know, it doesn't mean 4 they're not going to mitigate for it. It's just something 5 to keep in mind as far as flexibility. HEARING OFFICER WEBSTER-HAWKINS: Thank you. 6 7 MS. GRAVES: No additional questions from me. 8 COMMISSIONER MCALLISTER: Really appreciate that 9 perspective. Thanks, Ms. Oviatt. 10 HEARING OFFICER WEBSTER-HAWKINS: So I'm looking 11 at hopeful faces looking in my direction. We're prepared 12 to release this panel barring any objections from the 13 parties. 14 Appreciate everyone's attention and 15 thoughtfulness in this testimony. Thank you. 16 And next we're going to bring up the Water 17 Resources Panel. 18 (Pause) 19 Yeah. All right. So I do see we have some 20 experts that have joined the panel. We're moving on to 21 receiving testimony in the area of water resources, 22 specifically on the subtopics of reservoir design and 23 construction, delegation to the Division of Safety of Dams

So I have asked for the witnesses to come forward

and the Dam Safety Program fees.

24

25

1	and I want to take a poll to see who we have here.
2	Do we have George Wegmann? Thank you, Mr.
3	Wegmann.
4	Do we have Mr. Hildebrand? Hello.
5	Do we have Victor Grille? Welcome, Mr. Grille.
6	Do we have Lucas Thexton remotely? Excellent.
7	And Samrat Mohanty? Also remote? Okay. Good.
8	For the staff witnesses, we have Shahab
9	Khoshmashrab.
10	MR. KHOSHMASHRAB: Yes. I'm present.
11	HEARING OFFICER WEBSTER-HAWKINS: Is he also
12	remote?
13	Thank you. Thank you for chiming in.
14	And James Ackerman?
15	Hopefully remote. Have you confirmed that you've
16	seen him online? Don't know yet.
17	I see Erik nodding. Okay.
I	
18	And the center, I presume you do not have an
18 19	And the center, I presume you do not have an expert on this topic. Okay. Good.
19	expert on this topic. Okay. Good.
19 20	expert on this topic. Okay. Good. And then do we also have the representative from
19 20 21	expert on this topic. Okay. Good. And then do we also have the representative from the Division of the Safety of Dams?
19 20 21 22	expert on this topic. Okay. Good. And then do we also have the representative from the Division of the Safety of Dams? Yes, Mr. Babula?

MR. MALVICK: Yes. 1 Yes. 2 HEARING OFFICER WEBSTER-HAWKINS: Good. 3 let's get a microphone to Mr. Babula so he can have a voice. 4 5 MR. BABULA: We also have Brett Fooks, who's --HEARING OFFICER WEBSTER-HAWKINS: You do? 6 Is he 7 also remote? 8 MR. BABULA: Correct. 9 HEARING OFFICER WEBSTER-HAWKINS: Okay. 10 see. Thank you. 11 Yeah. MR. FOOKS: I am remote. 12 HEARING OFFICER WEBSTER-HAWKINS: Wonderful. 13 Thank you. 14 Okay. So as we did with the Biological Resources 15 Panel, I am going to administer the oath for the witnesses 16 who are offering sworn testimony, which is everyone except 17 the representative from Division of Safety of Dams. One by 18 one, I will ask you if you affirm, and then we will invite 19 and welcome the representative from the Division of Safety 20 When I do call your name, please state your name 21 and spell your name for the record, and then state whether 22 or not you affirm for the oath. 23 So do you swear or affirm that the testimony you 24 are about to give in this proceeding is the truth, the 25 whole truth, and nothing but the truth?

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1
              Beginning with Mr. Wegmann.
 2
              George Wegmann. G-E-O-R-G-E W-E-G-M-A-N-N.
 3
              I do.
 4
          (George Wegmann is sworn.)
 5
              HEARING OFFICER WEBSTER-HAWKINS: Thank you.
              Mr. Hildebrand?
 6
 7
              MR. HILDEBRAND: Curt Hildebrand. C-U-R-T
8
    H-I-L-D-E-B-R-A-N-D, Senior Vice President with Hydrostor.
9
              And I do.
10
          (Curt Hildebrand is sworn.)
11
              HEARING OFFICER WEBSTER-HAWKINS:
                                                 Thank you.
12
              Mr. Grille.
              MR. GRILLE: Victor Grille. V-I-C-T-O-R
13
14
    G-R-I-L-L-E.
15
              I do.
         (Victor Grille is sworn.)
16
17
              HEARING OFFICER WEBSTER-HAWKINS: Thank you.
18
              Mr. Thexton?
19
              MR. THEXTON: Yes. Lucas Thexton. L-U-C-A-S
20
    T-H-E-X-T-O-N.
21
              And I do.
22
          (Lucas Thexton is sworn.)
23
              HEARING OFFICER WEBSTER-HAWKINS: Thank you.
              And Mr. Mohanty?
24
25
              S-A-M-R-A-T, last name M-O-H-A-N-T-Y. I'm the
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President of Geotechnical and Mining at Hydrostor.
 1
 2
               And I do.
 3
          (Samrat Mohanty is sworn.)
               HEARING OFFICER WEBSTER-HAWKINS:
 4
                                                  Thank you.
 5
              Mr. Fooks?
              MR. FOOKS: Brett Fooks. B-R-E-T-T F-O-O-K-S.
 6
 7
              And yes I do.
          (Brett Fooks is sworn.)
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              HEARING OFFICER WEBSTER-HAWKINS: Thank you.
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10
               And Mr. Khoshmashrab?
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               MR. KHOSHMASHRAB: Shahab Khoshmashrab.
12
    S-H-A-H-A-B K-H-O-S-H-M-A-S-H-R-A-B.
13
               And yes, I do.
          (Shahab Khoshmashrab is sworn.)
14
15
               HEARING OFFICER WEBSTER-HAWKINS: Thank you.
16
               And Mr. Ackerman.
17
              MR. ACKERMAN: James Ackerman. J-A-M-E-S
    A-C-K-E-R-M-A-N.
18
19
               Yes, I do.
20
               (James Ackerman is sworn.)
21
               HEARING OFFICER WEBSTER-HAWKINS:
                                                  Thank you.
22
               We've completed the oath, and then also I want to
23
    acknowledge and thank Mr. Erik Malvick from the Division of
24
    Safety of Dams for joining us.
25
               Can you please state and spell your name and
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1
    offer your title, Mr. Malvick?
 2
              MR. MALVICK: Yes. My name is Erik Malvick.
 3
    the Division Manager for the California State Division of
 4
    Safety of Dams. And my name is E-R-I-K M-A-L-V-I-C-K.
 5
              HEARING OFFICER WEBSTER-HAWKINS: Thank you. And
 6
    just to remind the parties that Mr. Malvick is appearing at
 7
    the Committee's invitation, and he is not offering sworn
 8
    testimony, but his informed comment and perspective, and
9
    the Committee will field the questions from the parties if
10
    you have any for him in addition to our own questions for
11
    him.
12
              So let me just clarify, Mr. Malvick.
                                                     I have a
13
    couple of other names from DSOD and I don't know that if
14
    they're also with you.
15
              Mr. Shawn Jones?
              MR. JONES: Yes. Yeah.
16
17
              HEARING OFFICER WEBSTER-HAWKINS: Great.
                                                         Thanks.
18
              Can you spell your name for the record?
19
              MR. JONES: S-H-A-W-N J-O-N-E-S.
20
              HEARING OFFICER WEBSTER-HAWKINS:
                                                 Thank you.
21
              And Mr. Thyberg?
22
              MR. THYBERG: Yes. Good afternoon.
23
              My name is Peter Thyberg. P-E-T-E-R
24
    T-H-Y-B-E-R-G.
25
              Thank you.
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HEARING OFFICER WEBSTER-HAWKINS: Thank you again for appearing at our proceeding.

So we will start now with opening statements, and we'll start with the Applicant.

Do you have any of your witnesses prepared with an opening statement?

OPENING TESTIMONY BY LAUREL LEES

MS. LEES: Hi, my name is Laurel Lees, L-A-U-R-E-L L-E-E-S, and I am the Senior Director of Development Permitting North America for Hydrostor.

Together with George Wegmann, Curt Hildebrand,
Victor Grille, Lucas Thexton, and Samrat Mohanty, we
comprise the panel of experts for the subject area of water
resources, as further detailed in the previously filed
Applicants witness list.

My opening statement today addresses two subtopics identified in the order filed by the Committee on August 18th, with respect to water resources, specifically proposed Condition of Certification Water Five and proposed Condition of Certification Water Six on the matter of Environmental Review and Engineering Review of the Hydrostatically Compensating Surface Water Reservoir. We have worked closely with both CEC staff as the CEQA lead agency and with DSOD as the dam safety subject matter experts.

Safety and reliability of all project design 1 2 features is top priority for us, and we are designing the 3 reservoir to be consistent with all applicable laws 4 ordinances regulations and standards, including the 5 California Water Code for which DSOD is the responsible 6 agency. In the practical implementation of these two 7 separate but related review processes, we agree with CEC staff that DSOD will have oversight of construction in 8 9 operations of the reservoir. 10 Where we differ is how the FSA delegates CEC 11 approval authority to DSOD and requires us to effectively 12 enter into an additional state law permitting framework 13 beyond the CEC's exclusive siting authority by requiring us 14 to pay a separate DSOD permit application fee, then from 15 our original application for certification fee for CEC. 16 Thank you. 17 HEARING OFFICER WEBSTER-HAWKINS: Thank you. 18 Staff, do you have an opening statement? 19 MR. BABULA: Yes. Mr. Fooks will be presenting 20 that for us. 21 HEARING OFFICER WEBSTER-HAWKINS: 22 Mr. Fooks? 23 OPENING TESTIMONY BY BRETT FOOKS 24 Okay. Good afternoon, Commissioner MR. FOOKS: 25 McAllister, Commissioner Gallardo and Hearing Officer

Webster-Hopkins. My name is Brett Fooks and I am the Manager of the Safety and Reliability Branch. I'm here with other CEC representatives on this panel who will be able to address specific technical questions.

With this opening statement, I want to help facilitate the Committee's understanding of the relationship between the CEC and the Division of Safety of Dams, known as DSOD, and build upon the information provided by DSOD in regard to a project component called the hydrostatic compensating reservoir berm.

For clarity in the record, I will be using the term dam rather than berm because this project has two distinct types of berms. The first one is the hydrostatic compensating reservoir berm, which is a dam. The second one is a possible architectural berm that would be erected from the rock dugout to build the cavern. For the purposes of this statement, I am only referring to the hydrostatic compensating reservoir berm, i.e. the dam.

The hydrostatic compensating reservoir berm meets the definition of a dam per California Water Code sections 6002 and 6003. Therefore, the dam is subject to DSOD's requirements related to the design, construction, and operations of the dam. If the CEC approves the project the Applicant would be authorized to construct and operate the project. However, the design, construction, and operation

of the dam must comply with DSOD requirements. This is not unlike other project structures that must comply with building codes. It is important to note that DSOD's scope of review is limited to the dam and does not cover the reservoir, subsurface cavern, or any other parts of the project.

Staff acknowledges the Applicant's commitment to follow DSOD requirements in the design and construction of the dam. However, CoC Water 5 memorializes this commitment by requiring the project owner to comply with the requirements set forth in Division 3, Part 1 of the Water Code and California Code of Regulations, Title 23, Division 2, Chapter 1, collectively referred to as the Dam Safety Program requirements. Additionally this condition would require the Applicant to follow any design specifications required by DSOD.

The coordination between the CEC and the DSOD during the design, construction, and operations of the dam introduces a unique working relationship for both state agencies.

For context, in most power plant projects certified by the CEC, staff retains a Delegate Chief Building Official, known as a DCBO, who has technical expertise in the construction of industrial facilities and can review and sign off on plans, drawings, specifications,

and provide inspection oversight for construction activities on behalf of staff. The DCBO is paid for by the Applicant, but reports to the CPM and keeps the CPM, which is the Compliance Project Manager, informed of project matters. The key aspect is that the DCBO verifies overall construction compliance with applicable building codes. For this project, the DCBO's role related to the dam is limited to schedule oversight and documentation, and should not duplicate DSOD's dam safety responsibilities.

However, unlike other aspects of the project, the design parameters of the dam are not prescribed by a building code but developed through an iterative process by DSOD. To ensure that the CEC can provide effective oversight of the dam component of the project, CEC requires DSOD's expertise. The CEC would delegate technical plan review, approval, and inspection of the dam to DSOD. The DSOD will essentially be the DCBO for the dam. They will be the primary authority for reviewing the design and construction for dam safety and would engage with the CPM.

The final design signals have not yet been completed. Therefore, the boundary of oversight authority between DSOD and the DCBO cannot be fully delineated at this stage. That delineation will take place when the three entities -- the Applicant, DSOD, and the CEC-DCBO -- have sufficient design details to define that boundary.

Meanwhile the CEC and DSOD will coordinate to avoid gaps or 1 2 overlaps with the Applicant who is responsible for 3 providing timely design packages to support each review. 4 In summary the project is under the jurisdiction 5 of the CEC, with the CEC-CPM as the point person for the construction and compliance phase of the project. The dam 6 7 must be built to design specifications as required by DSOD, will act as the DCBO for the design plan review and 8 9 construction monitoring. The CEC, DSOD, Applicant, and DCBO will coordinate throughout the construction phase. 10 Once the project is operating, joint CEC-DSOD compliance 11 12 inspections will be coordinated as necessary. 13 This concludes my statement. I and other CEC 14 technical experts are available to answer any questions you 15 might have. 16 HEARING OFFICER WEBSTER-HAWKINS: Thank you, Mr. 17 Fooks. At this time --18 19 MR. BABULA: Hearing Officer Hawkins? 20 HEARING OFFICER WEBSTER-HAWKINS: Yes. 21 MR. BABULA: So I think Mr. Malvick may have some 22 statements or some key points he'd like to provide for the 23 Committee, if that's okay. 24 HEARING OFFICER WEBSTER-HAWKINS: You read my

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notes.

Because at this point, we do want to recognize the expertise of the Division of Safety of Dams. And just to express on behalf of the Committee, our goal here is to incorporate your technical expertise into the design, construction, and operational safety of the dam. And to hopefully create and memorialize an effective partnership with our Chief Building Official, where the respective legal and technical roles and responsibilities are articulated appropriately for the life of the project to the satisfaction of the parties.

So just to begin, as Mr. Babula suggested, maybe you can share with the Committee -- since this is the first time in the CEC's history that we've had a generating facility with a feature that qualifies as a dam, this is our first of hopefully a long collaborative relationship with DSOD, and we would appreciate if you could take a moment to describe just a summary of the legal responsibility, the technical expertise of your Division under the Water Code generally, but also as applied to this project, including the design and the construction and operation of the embankment or the dam.

So Mr. Malvick or your colleagues, if there's any statements you can provide in that line and anything else you'd like to add at this point as well.

OPENING TESTIMONY BY ERIK MALVICK

MR. MALVICK: Yeah. I'll begin.

And just to give a little quick background, I've been working for the Division of Safety of Dams for 20 years, so I've had extensive experience. My whole career has been there, and I have expertise in doing dam safety analyses. I've worked on new dams, enlargement of dams, removal of dams, both in design review and construction.

The Division of Safety of Dams is an office that represents California's dam safety program, which was founded actually in 1929 after the 1928 St. Francis Dam failure that saw the loss of over 400 lives, so it's been over 96 years at this point.

DSOD has over 70 engineers and engineering geologists who are experts in dam safety and we regulate over 1200 dams throughout the state, and all we do is review dams and focus on dam safety versus other groups and engineers that will often have expertise across the board, so we are extremely specialized to dam safety and saving life and property.

In terms of the statutes and regulations of the dam safety authorities, those are essentially delegated to DSOD and the Department of Water Resources who are, you know, our parent agency. And the way the statutes and regulations are set up is they set up our broad responsibilities, administrative and legally, for dam

safety and what we need to do to operate our program. But they delegate a lot of the technical expertise and safety and really requirements and guidelines from an engineering perspective to DSOD in recognition of our staff's expertise with dams and the recognition that all dam sites are different, making it really difficult to put a, you know, one size fits all to every dam in the state.

One of our primary activities as we've discussed already is the regulatory oversight of the design and construction of new dams. And additional activities include the annual inspection of existing dams to ensure they're continuing to perform as they're designed, reevaluation of existing dams, and enforcement for dam owners that aren't in compliance with our dam safety authorities. We do have dams throughout the state that —represented by owners that range from a small farmer all the way up to the state government itself.

Regarding the construction of new dams, our processes focus on independent reviews of every dam project that we have oversight on. That's huge, because California is -- you know, I won't say unique, but we're the biggest state in the country, and there's a lot of risk to our dams. Our independent review really serves as a verification and confirmation of dam owners and their consultants' designs, really to make sure that we're all in

agreement that a dam is safe. So we provide a benefit to the dam owners in confirming that a dam is safe, and for the consultants who also can take comfort in knowing that we're all in agreement that a dam is safe. And again, this is really just to make sure that we don't have, you know, we're lowering the risks of losing life or property.

For new dams, this process ends up in our design review. It's actually an iterative process. We do try to work collaboratively with owners and other regulators, starting with the initial geologic studies and seismic characterizations of sites, looking at the design criteria and alternatives for the design. We do full analyses and modeling of all components of dams, sometimes complex numerical modeling for the barriers, spillways, outlets, all for that extra confirmation and validation that a dam site is safe.

And then we do independent reviews of plans and specifications to make sure that sites are constructible, that contractors can build things to specifications, and that they're really just meeting the standards we see in practice nationally and sometimes even internationally.

And then finally we have -- you know, one of the newest pieces of our program is reviewing and approving inundation maps that will support emergency action plans that are approved through the California OES.

Now when we approve what we call the application, it essentially says that the design is safe to be built. Construction of the project under our oversight is essentially then authorized to begin, and we usually hand it over to what we have as a field engineering branch that'll take care of the construction oversight. Our field staff will basically perform periodic construction inspections of the site with the focus on the pieces of the project that we see as the most important for dam safety, and they'll usually look at making sure that quality assurance measures are being met as specified in the project documents.

And then once the project is constructed, DSOD performs final construction inspections as a final verification that the dam is constructed in conformance with our approved plans and specifications, and then at that point we will usually certify through almost like a second type of permit that the project is safe to store water, and then at that point we're usually requesting final as-built plans for our records so that we can keep an ongoing record of the dam as it was built for future inspections.

And so once a dam is constructed and certified and it's actually being put to use, our ongoing regulation essentially consists of, you know, annual inspections of

the dam site. There are various pieces of statutes that require things such as outlets to be exercised annually every three years in our presence, and numerous items related to maintenance that have to be accomplished. And then we will also conduct periodic re-evaluations and ensure that as the states of, you know, dam practice evolves, that anything that needs to be changed can be changed.

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Now the last thing I want to kind of mention about our program is really how we operate in terms of our funding, because we are essentially a program that is fully funded by dam owners. And that is established through our statutes and regulations. There's really no mechanism to easily break from that. And essentially the way it works is that our fees and costs are broken into what we call an application fee, which is essentially set up as a fee schedule based on the price of design and constructing a project, and then annual fees, which are essentially the cost for the ongoing regulation of existing dams. And the purpose of that type of setup is to, one, keep them having this very complex system of billing, and two, to really try to make things as consistent as possible in regulating all the dam owners and ensuring that dam owners aren't paying for other dam owners projects. The annual fees are essentially really there to -- well, I already mentioned

that part.

But so, you know, one of the big concerns we have is that there really isn't a means for DSOD to really directly charge owners for the pieces of work that they would do. Historically, we have dealt with projects where owners have in the past requested certain accounting on that and, you know, historically, we have found that actually our application fees are a lot less than the work we do expend in reviewing design and construction of projects, and we would only expect that such a situation would potentially, you know, apply in this case.

On this project, we don't know a whole lot at this point. You know, we haven't gotten to the point where we've seen enough of a plan, nor have we invested enough time on it to really dig into it. You know, our office looks at permits and applications for between 100 and 150 dams ongoing each year, and we do tend to prioritize projects. You know, most of those works end up being repairs and addressing deficiencies at other dams in the state, and so the application process is what usually really kicks in a new dam to get fully into our queue for review.

I think Mr. Fooks' comment about, you know, what might come into our oversight is pretty much what we would see on a project like this. It would really just be the

embankment containing the reservoir, maybe a portion of the reservoir itself, and then anything like a spillway or outlet that is needed to ensure safe operation of that dam.

And that's it for my remarks. If anybody has any questions, I'm more than happy to answer them.

DIRECT EXAMINATION

much. You've answered a lot for me, and it's helpful to hear how your agency both is funded but approaches its work based on the applications you receive.

What I wonder -- what I was interested to hear -- a couple things. You referred to your review as almost an independent review, which is, it seems fitting with our process because we have our exclusive jurisdiction, and yet we're seeking your independent review as the dam design and construction and safety experts. And then also it was good to hear that you have a culture of collaboration with owners and regulatory agencies.

And given that and what you know about our exclusive jurisdiction and this particular dam, which is actually a necessary but secondary feature of an energy storage project, do you have any recommendations -- given the tension to the extent that you're aware of it, do you have any recommendations about how we might be able to articulate or memorialize with your agency the respective

roles both legal and technical? And I don't know if you have any templates, if you will, of working with other regulatory agencies.

And then also on the fee issue here, if you even have any food for thought as we go forward.

MR. MALVICK: So I'll start and then I'll defer to maybe Peter Thyberg.

But so in terms of the way we work with other regulatory agencies, we're not usually regulating. I will say, you know, our biggest I will say parallel is that we coregulate dams with FERC, the Federal Energy Regulatory Commission.

But that review is a parallel process. And so we're not -- we're issuing a permit and FERC is issuing a permit. And, you know, that has been -- there has been tension on that in the past, but both agencies recognize that they have jurisdiction on each project, and so there's usually no tension in the review because both have the same objective of having dam safety.

HEARING OFFICER WEBSTER-HAWKINS: Mm-hm.

MR. MALVICK: And then in terms of the -- so there's really nothing to go back on in any type of formal connection on that.

And then I think the fee thing, it's really just comes down to -- you know, we have the Water Code set up

and the way it is. And it really defines already how things are, you know, how things are paid for, you know, by our office, and that was established initially back around 2005 and has gone through a little bit of recent refinement.

But the big thing is that every dam owner is paying for things the same way, and we're not really set up to deal with a different format, which would potentially require -- you know, would require time for us to establish a new process if that were to become necessary. And it would -- it would be challenging for us to track all the fees we would have on a project.

And, you know, one of the big things is that most of our projects involve between, you know, four to nine technical staff at any -- you know, throughout the review process. And so the fees on a project could be a lot bigger than what the fees schedule suggests on our own website if we were to actually break it down by hours, but we don't have a mechanism for tracking that. So we don't really know exactly what that could be, and I wouldn't want to speculate what it would be.

And then I don't know if Peter or Shawn want to feedback anything else on some legal aspects.

MR. THYBERG: Yes. Good afternoon. Peter

Thyberg. I'm an attorney with the Department of Water

Resources, and I support the Division of Safety of Dams.

Thank you, Erik.

And I definitely saw some great questions from the Hearing Officer regarding the DSOD's program and how we can continue to integrate with the CEC on this interesting project.

I just wanted to reiterate that, you know, as
Erik had mentioned, the expertise that the Division has -not only are they, you know, wholly focused on dams, but
many of the engineers in the program are also involved in
cutting edge research, presenting at conferences. So they
really are, you know, the leading edge when it comes to dam
safety research and review, which is, you know, quite a
resource to have within the Department.

In terms of continuing to collaborate and work together with the CEC, I am working with the CEC attorneys on MOU based on some samples that Erika Giorgi had shared with me. So we're definitely in conversation with that, which I think should definitely help our agencies integrate on any future work on this project.

So that would be very helpful. I'd also add on the application fees. You know, as Erik mentioned, oftentimes the costs of those fees do not -- the costs of the actual work for the projects do not align with the fees, and there was a recent change in the Water Code

that's hoping to better right-size the fees collected with the actual work that's performed. That's still in progress, and we have regulations that are in progress to continue to refine.

But in terms of this project, to kind of go to Erik's point about the fees that are collected not necessarily covering the costs, at least for all projects, that is something that is ultimately -- could be trued up through our annual fee regulations, which account for any shortages in terms of the application fees and how that might be allocated for the annual fee, you know, based on our regulatory or regulations that are set forth.

That's it for me. Thank you.

HEARING OFFICER WEBSTER-HAWKINS: Thank you.

Yes, Commissioner McAllister has some questions for you at DSOD. Thank you.

COMMISSIONER MCALLISTER: Yes. Thanks.

Sort of questions, but for the Applicant, just clarifying questions. And then I mean -- I think what we're all trying to do here is sort of have a bounded understanding of the costs and the level of effort.

So if my math is right, the average depth of the reservoir is like a little over 20 feet, something like that, just like acre-feet versus acre surface area, something like that?

1 MR. GRILLE: My name is Victor Grille. It's 2 around 40 feet. 3 COMMISSIONER MCALLISTER: Forty feet. Okay. 4 Okay. Because it was around 200-some-odd -- anyway. 5 There's 200 acres versus acre-feet. I was getting about --I was getting about 20, on average, but anyway. 6 7 So in terms of like the sort of -- this is for our DSOD colleagues. Thank you so much for being on. And 8 9 I agree, your expertise is needed on this on this project. 10 In terms of sort of the scale of this dam -- I mean, it's not Oroville, you know, and it's sort of the 11 12 physical footprint of the dam height construction, do you 13 have a general idea of sort of the cost? 14 I'm not going to ask for a number, but, you know, 15 in terms of the fee schedule for this, do you have sort of 16 an idea that you can kind of rely on, order of magnitude, 17 kind of, you know, pretty close to what it's likely to be? 18 And then you said that there was -- there would 19 be possibly some ability to true up, you know, along the 20 line, sort of align the actual cost with the -- the actual 21 sort of fee with the actual cost you incur. A little more 22 color on that would be helpful. 23 MR. MALVICK: Well I just --24 COMMISSIONER MCALLISTER: Looking for sort of 25 your bounded understanding of what the cost is likely to be 1 for this project.

MR. MALVICK: Okay. This is Erik.

So we don't set what the cost for a project can be, and it can be widely variable. Our application fee schedule is not set up by a size or anything, other than it defines the application fee based on what the cost for the owner would be to design and construct the facility. That, you know, would basically be the portion of the facility that would be under our oversight.

So, you know, to your comment about the size and it not being in Oroville, well, that should be reflected in the cost of building this.

COMMISSIONER MCALLISTER: Okay. That's good to know. Okay.

MR. MALVICK: But it's set up based on a percentage of that cost that scales up and what we see is that our efforts tend to be require a little bit of a higher percentage for a smaller facility, but then the overall scale that cost will still be low because you might have a much cheaper facility to build versus a large one.

The true-up type of situation is more of something we have program-wide. It would not reflect a specific dam.

COMMISSIONER MCALLISTER: Okay. Got it.

MR. MALVICK: So that's just something we --

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    that's something we have to use, because most of the times
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    our application fees per the schedule do not cover our full
 3
    costs, and so the true up is actually used to adjust our
 4
    annual fees, which are used to keep the program ongoing for
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    the ongoing dams to cover any shortfall we might have with
 6
    application fees.
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              COMMISSIONER MCALLISTER: Okay. That's helpful.
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    Thanks.
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              I mean, in this case, it seems like you have more
    of a role -- a more central role just because you're going
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    to be reviewing -- like, you're from the from the get go,
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    sort of from initiation of construction. It's not an
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    existing dam. So you're going to participate in design and
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    design review and that sort of thing.
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              So is this -- is that something you typically do,
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    or is this sort of a special case in that regard.
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              MR. MALVICK: No. That's what we do for every
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    project --
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              COMMISSIONER MCALLISTER:
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              MR. MALVICK: -- and every application.
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              COMMISSIONER MCALLISTER:
                                        Yeah. Okay. Great.
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              So maybe I'll look to the Applicant to sort of
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    where you're -- if, you know -- any ongoing discomfort you
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    have with where this arrangement sits, if any?
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              MS. LEES:
                         Thank you. Laurel Lees.
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I would say the only discomfort really is this 1 2 idea of submitting a new permit application fee, as we're in two separate state law processes. And I -- that's 3 4 consistent with the opening testimony. 5 COMMISSIONER MCALLISTER: Yeah. MS. LEES: And I think that as we're speaking, 6 7 the general discomfort is that the capex cost of building 8 our reservoir, because it's the purpose of storing and 9 releasing energy, is going to be different than a dam is --10 COMMISSIONER MCALLISTER: Yeah. 11 MS. LEES: -- that's connected to surface 12 hydrology and is for that purpose, so there's just that 13 disconnect. That's the only discomfort. But them participating in engineering reviews as 14 15 a subject matter expert, we agree with. 16 COMMISSIONER MCALLISTER: Okay. But you have a 17 sense of what the dam portion of your project is going to 18 cost to build, correct? 19 MS. LEES: Yes. We base our estimate on the 20 whole reservoir. 21 COMMISSIONER MCALLISTER: Yeah. 22 MS. LEES: The whole feature. Mm-hm. 23 COMMISSIONER MCALLISTER: Okay. So there are 24 numbers to work from within the DSOD process. 25 And if you're not the one paying those fees then

who would pay them?

MS. LEES: Well, we're open to paying reasonable fees for processing, but the application fee itself being a percentage of capex of that feature is nearly the same level as a whole permit application fee with the CEC. It's like a whole -- it's that level --

COMMISSIONER MCALLISTER: Okay.

MS. LEES: -- of expense. And so we definitely understand that the culture of DSOD is not, like, a consultant or developer deposit account at the county where you can draw down, but we're absolutely open to paying for their time and their expertise. We just don't know how to make this work.

COMMISSIONER MCALLISTER: Okay. Okay. I think I understand.

HEARING OFFICER WEBSTER-HAWKINS: I have a question actually for staff on this issue and maybe for Mr. Fooks.

How is the payment of this fee -- you know, aside from the amount, which I understand that's what I'm hearing might be the biggest sore spot -- but how is the payment of the fee any different in our projects from, say, permit applications for the FDOC, for W -- you know, for the Region Water Quality Control Board? I mean, I guess, is there a meaningful distinction at least -- you know, to

address the concern about a separate state law process?

I think we have other projects where fees are -- to other agencies are certainly paid.

MR. BABULA: This is Jared. I could jump in on a few things.

So I don't think we're in a disagreement regarding -- we call it an application fee, but nobody is saying that DSOD is issuing some entitlement --

HEARING OFFICER WEBSTER-HAWKINS: Right

MR. BABULA: -- for this application. It's just that it's the fee to get them to do all the stuff they just talked about, the iterative analysis, assessing design, the construction and so forth. So we're not saying there's a separate entitlement.

Now I understand the concept of, well, you have to pay an application fee to the Energy Commission to start things out. But to your point, Hearing Officer, there are a lot of other types of fees where we subsume that entitlement or that permit but we still want the feedback from the other jurisdiction. And so the fee -- we would require them to be a fee submitted, or if it's an annual compliance thing and so forth. So it's similar to that.

And the other thing too is it probably would help to crystallize if they're considering the whole reservoir in their costs versus just the berm part. And I think some

of that would get fleshed out when the actual plans are to a degree where we can identify this is the dam part that DSOD is going to be reviewing. But certainly, for example, no one should be including the digging out and creating of the cavern or anything like that as part of the part to be in this schedule for fees. So it's a little bit of a moving target.

But I believe from what Mr. Harris had said, they are -- they definitely want to pay for what -- the sort of work that DSOD is doing. It's just a matter of what's the best mechanism.

COMMISSIONER MCALLISTER: Okay. I appreciate that. Thanks for articulating that. I was kind of confused. Just -- I mean, it seems like it's okay, you're paying for services to get your project implemented as -- you know, as if you were paying an engineering firm to do some work. Only in this case, the rate schedule kind of is different and it's governed by the state.

MR. BABULA: So an example is that the DCBO -- COMMISSIONER MCALLISTER: Yeah.

MR. BABULA: This DCBO is under the CEC and it works for us, but they're paid for by the Applicant.

COMMISSIONER MCALLISTER: Yeah. Exactly.

24 Exactly.

And so I guess is there a way to kind of sharpen

up pencils and sort of bound the scope of the project and sort of move at least closer together, along the lines of what Mr. Babula just said.

MR. HARRIS: Yeah. If I could ask some questions. I think maybe --

HEARING OFFICER WEBSTER-HAWKINS: Please do.

MR. HARRIS: Yeah. I think we're getting somewhere, by the way, which is good.

But I guess I want to bring a sharper focus on what we're talking about this facility. And I know DSOD has jurisdiction over Oroville, for example, which is a very large structure. We're definitely not that. From my read of the regulations, you know, we can talk about jurisdiction there as well.

But I guess one of the things that I'm concerned about is that this is not like anything that DSOD has done before, and I guess I want to point that out. We've got an underground cavern which will contain 90, maybe 95 percent of the water here. Okay? And so approximately --in rough numbers 600 acre-feet of water total, and at maximum pool, about 45 acre-feet. So the vast majority of this water is incapable of leaving the project site because of the gravity, basically.

Let me let the experts talk about that. I'm sorry. I'm kind of --

HEARING OFFICER WEBSTER-HAWKINS: Thank you.

MS. LEES: Yes. Yes. So the reservoir itself holds approximately 600 feet, and then that which is above ground that could be at risk should there be a catastrophic event is approximately 45 acre-feet. And, you know, it's different than the dam and that there's no surface water hydrology, there's no connection, and there's no downstream -- there's no downstream connection where this would flow and impact X, Y, and Z.

The other feature that's different is you have a built in catastrophic risk management measure, meaning the cavern itself in that, like a bathtub, you would unplug it and all the water goes down. So in calculation of the permit fees being a percentage of capex of the reservoir, it's just the reservoir. It is not construction of the cavern or any of that.

So it just by the nature of the project in it being lined, there's different features at the bottom to function as an energy storage project, and the fact that it needs to maintain a particular level of pressure to provide the gravity needed to discharge at 13 hours to provide your round trip efficiency, you know -- it like goes on and on and on. That type of engineering that cost and then the construction of it is what we based the application fee -- what we calculated using the California Water Code, and

that would be at the level of a CEC permit.

COMMISSIONER MCALLISTER: So I guess that strikes me that -- it seems like unless I'm misreading the rules here, it seems like there is a constrained scope of looking at, you know, the berm slash dam and sort of framing it as a reservoir, you know, the above ground portion of the reservoir that would have a certain -- that you could cost out.

And I guess I'm just suggesting that as maybe an alternative -- like, an approach, a path forward to sort of bound the costs that -- and I don't know, I'd love to hear DSOD's sort of view of this, but how -- you know, how large of a project boundary for purposes of your work would seem to fit. Like a fairly straightforward definition of a dam, or like the whole project, or somewhere in between, or what?

I mean, you don't know because you haven't gotten all the details yet, perhaps, but I'm just --

MR. MALVICK: So --

COMMISSIONER MCALLISTER: -- seeing that as a path forward.

MR. MALVICK: So this is Erik Malvick, and so I wanted to get in a few comments.

So one, you know, traditionally when we work on a project, especially something like this, so one -- a

project like this, I mean, this is obviously unique and first in California, but, you know, working with an offstream reservoir like this without hydrology, for instance, is not unusual, you know? And we have worked on pump storage facilities that are dealing with two reservoirs of water that are in line. So we have experience working with facilities like this. They do fit into the framework of what we usually do.

But one of the big things we do when we deal with projects like this is, you know, we try to work with the applicants and the owners to really refine what will fall into our regulatory pieces, and what needs to fit into that application fee, because from what was described, it sounds like a lot of those pieces would not fall into our application costs. So a lot of the pieces that are -- would be involved in, you know, connecting the reservoir to the cavern are not going to fall into our regulations and oversight. So that's a big piece of it.

And then I think the secondary part, you know, really about this being an off-stream reservoir is that -- and not having any downstream, you know, stream channels is that that doesn't preclude the potential for that structure to fail. And, you know, part of the reason this is falling into the definition of the dam per the Water Code is because it does have a potential significant storage, you

know, above grade, even if that is not necessarily going to be the case 100 percent of the time.

But, you know, failures of dams throughout the country and in other places around the world, you know, can and do happen, usually in the circumstances you don't want to happen. And so that's where we have to take our job pretty seriously.

COMMISSIONER MCALLISTER: Absolutely. And none of us want that eventuality, of course. So that's definitely why we want you on the case here.

But it sounds like there's definitely some opportunity to get this discussion closer together.

I'll maybe ask the Hearing Officer -- well, ask the Hearing Officer or staff what that process might look like going forward so that we can capture any advancements in those negotiations in the final -- in the proposed decision.

HEARING OFFICER WEBSTER-HAWKINS: Right. I have the same question about whether there's any foreseeability of a draft MOU that might be available for the Committee's benefit as we're drafting the PMPD.

 $$\operatorname{MR.}$$ BABULA: So I can -- this is Jared -- I can add a few things.

First of all, I don't think we need to resolve the fee thing in order for you to reach a decision, because

it's not specific to like an environmental impact.

I would also note that we have had discussions with the Applicant and DSOD, and we met with the legal counsel for -- the three of us met to try to see where we are on the issue of fees. And so we are making an effort to try to get that resolved.

I'll let Erika talk about where we are with the MOU.

COMMISSIONER MCALLISTER: Maybe I'll just make a quick comment there. I'm sort of intuiting and sort of keying off of the heartburn that the Applicant sources seems to feel about the fee, and so just trying to kind of see how much how much room for, you know, finding some adequate, accommodating middle ground. Not making a value judgment about anybody's particular stance here, but just trying to kind of feel it out.

MR. BABULA: Right. Well, for the fee, we're -so staff's position is we're indifferent. We just want to
make sure DSOD gets what they feel they need to do their
work. And so whether it's structured as a front loaded
one-time thing or it's billed, we're open to any of those
processes, and we're trying to facilitate some process.

We do understand how, given how we have structural fees in our statute and DSOD has the similar stuff, and so it's a little more difficult for an agency to

suddenly switch how they get their money and how they can do it. But we'll try to accommodate and facilitate that.

MS. GIORGI: Erika Giorgi, in-house counsel.

We do have a framework that we are vetting internally that we haven't been able to share with our DSOD colleagues yet. I don't have a time frame, too, on to when we would be able to share that draft. But just like any other interagency agreement, you know, I would expect some back and forth before we're able to kind of finalizing the framework.

HEARING OFFICER WEBSTER-HAWKINS: Thank you for that.

MR. BABULA: I just want to say on that, again, I don't think that needs to be finished either before the decision is rendered.

COMMISSIONER MCALLISTER: Okay. that was my next question.

MS. GIORGI: Right.

COMMISSIONER MCALLISTER: I just kind of want to understand how we approach this issue and frame it within the PMPD. So we're getting, you know, the right level of guidance, and also not kind of creating conditions where there's uncertainty that can be exploited by anybody.

Right?

So that's kind of where -- and I'm not saying exploited in the negative sense, but just sort of, you know, none of us want to see costs that aren't predictable.

So, you know.

HEARING OFFICER WEBSTER-HAWKINS: Do you have any questions of the experts?

MR. HARRIS: I actually just want to make an observation. It's not just the fees, but I want to come back to the issue.

In the conversation we've had to date, it's been expressed -- at least I've interpreted it to be -- that there's a certain rigidity in the fee structure that it's sort of like, that's what the regulations in the statute provide. If there's a lot more apparently flexibility and, you know, how we did the cost accounting as the Commissioner was suggesting, that's good news I think to us. If we look a lot more like a 45 acre-foot pond, then, you know, a very large construction project, that's helpful, but I haven't heard anything.

And maybe I'd ask to put Peter on the spot.

Because we've had some very good conversations -- I

appreciate that, Peter -- about whether they have the

ability to be flexible in their fees. You know, I think

the biggest problem is figuring out how to get how to get

the right fee and get to get it to them so they can use it given their position is not a general fund agency.

So that's the money side. The other side, though, is time. We agree that the Commission has a lot of authority to delegate compliance verification, but not compliance.

At the end of the day, if for unforeseen circumstances the Department can't get to our engineering review, and maybe we have a bad flood year and they're doing things that are higher priority, we still need to be able to move forward. And so part of the clarity that we're looking for from the condition is what the Commission always retains, is the stability. That, look, even though I get a DCBO and say hey, even at the end of the day, you know, we retain the jurisdiction over the entire project, and you can move forward on our say-so without any legal peril or compliance problems. And so money and time, we're back to that. Right? So but it is both things.

I just wanted to make sure we're clear on those concerns.

COMMISSIONER MCALLISTER: I appreciate that, Mr. Harris. And I want to just apologize for our colleagues at DSOD. You know, this is all new for all of us so, you know, thanks for holding our hand into this new relationship and working on the MOU.

And, you know, we absolutely want your expertise on this project if it moves forward. And I also heard rigidity in fee schedule, which is not surprising in a state agency, but I did hear some flexibility in terms of the project scope that would then become the basis for the fees. So I hope that you can all make some progress talking about that in, you know, a meaningful time frame so we can just improve the clarity going forward about the project itself.

MR. HARRIS: If I can just make one more point. In terms of rigidity, too, the more we can put these kind of things in the verification language as opposed to condition language -- because at least the draft language now suggests a payment of fee as condition. And as you all know, verification language, we can work with you and your staff to modify verification language.

And so we might be able to solve a lot of the angst just by taking the word verification from where it is in the condition and moving it up farther, right? So that the implementation language is something that we can change without having to go -- no disrespect Commissioner -- back to a full Commission hearing for an amendment. So that's one of the things we're going to want to work with everybody on, is making sure implementing language ends up in verification.

HEARING OFFICER WEBSTER-HAWKINS: All right. 1 2 Thank you. 3 MR. BABULA: Yeah. I would just add. One thing 4 is -- so I agree with Mr. Harris for a lot of what he said. 5 The thing is, is that if for some reason there's some delay and DSOD can't do something of this step of 6 7 iteration and design and so forth, CEC doesn't necessarily have that expertise to do it, and so we do have to rely on 8 9 the agency that has the expertise. So I think 10 fundamentally the best way to address all these issues is 11 to be proactive, get the information to us and DSOD as soon 12 as possible, and get the fees and then move forward and 13 work collaboratively. 14 And it is very common that right after 15 certification, staff, the DSOD -- or staff and the DCBO and 16 the Applicants' construction team will have meetings to get 17 things going, and so that we are ready to go as soon as it's certified. So there's a lot of sort of behind the 18 19 scenes post-certification that can happen to make sure that 20 everything is moving smoothly and there's no hiccups. 21 MR. THYBERG: This is Peter Thyberg here. 22 you. 23 I appreciate, you know, the comments on this 24 issue by the Commissioners, as well as Mr. Harris's 25 concerns and, you know, Jared's also contributions to the

conversation.

I think, yeah, the more the Applicant can share in terms of the project, the details that really go into what components will require DSOD review will really kind of dictate what kind of fee structure that would exist under the Water Code in Title 23. So I think that would be a big part, having those productive conversations to really find out which components really are within the DSOD Water Code requirements and which ones are not.

As to just, you know, Mr. Harris's comment about you know potential delays in review. As we all know with reviews, a lot of it will depend on, you know, the quality of the submittals, the responsiveness to comments, unforeseen issues that always come up on projects. I also find it, you know, understandable that a project like this, that the submittal for our process for our dam design review may not really kick off until after the Commission potentially, you know, issues an approval. So to me, you know, an approval or compliance of the Water Code to me is a critical, you know, set of laws that would need to be complied with, and any sort of condition that would come with an approval, you know, would ensure that.

So I do believe that you know DSOD's review and approval as outlined in the proposed conditions that staff put together outline how this project, you know, can't

commute those laws as it relates to the dam component of this project, and -- yeah.

I think that's definitely a big component of how this project can proceed.

Thank you.

HEARING OFFICER WEBSTER-HAWKINS: Thank you.

Commissioner Gallardo has one last question.

COMMISSIONER GALLARDO: Thank you.

So just to clarify, so for the DSOD is there an additional application that the Applicant would have to file for this process?

MR. MALVICK: So I mean I think this is something that we're trying to work out through the MOU process, but if this was a traditional dam they would have to file an application to essentially initiate the review of the project through our office, and that's what the fee is usually associated with, and the Water Code really gives a definition of what an application consists of.

COMMISSIONER GALLARDO: Okay. So there has not been a situation where you're working with an agency, there's already an application filed, and then you work out an MOU to figure out the fees but without having the Applicant having to submit an additional application or major paperwork?

MR. MALVICK: No. There has never been that type

of project.

COMMISSIONER GALLARDO: Okay. Thank you for the clarifying.

MR. HILDEBRAND: I think one useful set of facts that would -- Curt Hildebrand with Hydrostor. Thank you, counsel.

One set of facts that would be useful as we go through this discussion is the timing for both the construction, the fill, and the commissioning of that reservoir and both surface and subsurface.

We are looking at approximately 36 months before we -- after we start construction. Roughly 36 to 40 months before we start charging the reservoir. That water will all flow down into the cavern for the next 14 months as we fill that reservoir, so we will have no water above grade for approximately four years after we start construction. Point being, we do have time before this reservoir will be charged above surface to reconcile our designs and all the other topics that were on the table here today.

HEARING OFFICER WEBSTER-HAWKINS: So what I'm hearing is that there's no disagreement about the analysis around environmental impacts mitigation compliance with LORS. It really is the design and construction timeline and the approvals of our sister agency threaded in through that, for the comfort of the Applicant but also for staff

because we all want it to be -- we want the relationships to flow and be clear.

So with that, I think we can -- unless there's any additional testimony.

MR. BABULA: I just want to address some question that Commissioner Gallardo had on the application.

So at this point the Applicant has provided a lot of information in order for the CEC to do our work and -- but the level of information needed to assess the structural aspects of the dam isn't there yet. And so that still needs to be provided.

And in fact there's nothing that prohibits the Applicant, if they want to start to provide stuff like that to DSOD even before certification. That would be on them if it doesn't get approved, but they certainly can engage to try to move this forward. But ultimately that level of information would also be needed by the CEC for us to be able to do our oversight as well.

HEARING OFFICER WEBSTER-HAWKINS: Thank you.

If there's no objection --

MR. HARRIS: I think Jared will agree with this that that stuff is routinely done post-certification, though. We're not -- we don't have a gap currently, correct?

MR. BABULA: Yeah. That would all be done post-

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certification.
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              MR. HARRIS: Thank you. I just I don't like
 3
    holes.
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              MR. BABULA: No. Sorry about that.
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              MR. HARRIS: And neither does DSOD, so --
              HEARING OFFICER WEBSTER-HAWKINS: So if there's
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 7
    no objection, I'd like to close the testimony on this topic
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    and subtopics. I want to thank our colleagues at DSOD for
9
    engaging with us now, and probably for quite some time into
10
    the future. So thank you very much.
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              We are going to take a break 15 minutes, and then
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    we will reconvene on the cavern construction topic.
13
              COMMISSIONER MCALLISTER: I want to make just --
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              HEARING OFFICER WEBSTER-HAWKINS: Commissioner
15
    McAllister?
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              COMMISSIONER MCALLISTER: I want to make just one
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    comment.
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              I see this as sort of a demystification process
19
    in part and so, you know, happy to sort of push that along
20
    during the course of you know the application,
21
    consideration, and certification process in you know
22
    getting to a PMPD. But we by no means have to figure out
23
    all the details in order to reach a decision on the
24
    project.
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              But just, you know, to the extent it's helping
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1
    us -- to the extent it's helping us sort of define the
 2
    project and give it clarity so that we can reach a
 3
    decision, I think this conversation has been really
 4
    helpful.
 5
              So thanks everybody.
              MS. WHITE: And thank you.
 6
 7
              So with that we are going to take a break.
                                                            We'll
    reconvene at 4:20, and we'll reconvene on the cavern
 8
9
    construction topics.
10
              Thank you. We're off the record.
11
          (Off the record at 4:05 p.m.)
12
          (On the record at 4:22 p.m.)
13
              HEARING OFFICER WEBSTER-HAWKINS: We are back on
14
    the record.
15
              So now we move on to our final topic for which
16
    we're going to receive testimony, and it's the topic of
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    cavern construction, namely facility reliability, geology,
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    and worker safety and public health.
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               So at this time I request that the parties bring
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    their witnesses to the stand, either in person or on Zoom,
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    on the topic of cavern construction.
22
              And as stated in the notice, we'll swear in the
23
    witnesses for all parties on the subject of cavern
24
    construction as a panel.
25
              I do want to clarify do we have Jesse Steele in
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    person? Welcome, Mr. Steele. After I take a poll of
 2
    everybody's attendance I'll be swearing you in. I believe
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    all the other witnesses are already sworn in for the day.
 4
              UNIDENTIFIED SPEAKER: (Indiscernible.)
 5
              HEARING OFFICER WEBSTER-HAWKINS: Just to -- is
 6
    there a -- okay.
 7
              We have Mr. Grille, we have Mr. Thexton, Mr.
8
    Mohanty, Mr. Hildebrand, Mr. Stein, and Mr. Wegmann.
9
              For staff, Mr. Delano?
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              MR. DELANO: Yes.
11
              HEARING OFFICER WEBSTER-HAWKINS: Appearing
12
    remotely?
              MR. BABULA: All of staff's witnesses are remote.
13
14
              HEARING OFFICER WEBSTER-HAWKINS: Okay. And so
15
    that would include Mr. Delano, Mr. Salyphone, Mr. Sofi, Mr.
16
    Greenberg, Ms. Chu, and Mr. Khoshmashrab.
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              MR. BABULA: Yeah.
                                  That's correct.
18
              Dr. Sofi, Dr. Greenberg, and Dr. Chu are also
19
    appearing by zoom.
20
              HEARING OFFICER WEBSTER-HAWKINS: Thank you for
21
    that.
              And just to clarify, does the center have any
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23
    expert witnesses on this topic?
24
              No. Thank you.
25
              So what I'm going to do is ask each of the
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1
    witnesses who have not already been sworn in to state and
 2
    spell your name for the record, both from the Applicant and
 3
    -- well, first with the Applicant, and then we'll go to the
    staff.
 4
 5
              So let's start with Mr. Steele.
 6
              If you could state and spell your name for the
 7
    record.
8
              MR. STEELE: Mr. Jesse Steele J-E-S-S-E
9
    S-T-E-E-L-E from WSP.
10
              HEARING OFFICER WEBSTER-HAWKINS: Thank you.
11
              And let's go to staff's witnesses. Same request
12
    to state and spell their names for the record.
13
              Mr. Delano?
14
              MR. DELANO: Kevin Delano. K-E-V-I-N
15
    D-E-L-A-N-O.
16
              HEARING OFFICER WEBSTER-HAWKINS: Mr. Salyphone?
17
              MR. SALYPHONE: Yes. Present. Kenneth
18
    Salyphone, K-E-N-N-E-T-H S-A-L-Y-P-H-O-N-E.
19
              HEARING OFFICER WEBSTER-HAWKINS: Mr. Sofi?
20
              MR. SOFI: Ardalan Sofi. A-R-D-A-L-A-N S-O-F-I.
              HEARING OFFICER WEBSTER-HAWKINS: Mr. Greenberg?
21
22
              MR. GREENBERG: Alvin Greenberg. A-L-V-I-N
23
    G-R-E-E-N-B-E-R-G.
24
              HEARING OFFICER WEBSTER-HAWKINS: Ms. Chu.
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              MS. CHU: H-U-E-I-hyphen-A-N C-H-U.
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              HEARING OFFICER WEBSTER-HAWKINS: And Mr.
 2
    Khoshmashrab, is he also testifying on this panel?
 3
              MR. BABULA: He may, but he was previously in the
 4
    other panels.
 5
              HEARING OFFICER WEBSTER-HAWKINS: Right.
                                                         Okay.
 6
    Thank you.
 7
              So I'm going to administer the oath, and then one
    by one I will ask the new members to -- I will call on you,
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9
    and for you to affirm the oath.
10
              Do you swear or affirm that the testimony that
11
    you are about to give in this proceeding is the truth the
12
    whole truth and nothing but the truth?
              Mr. Steele?
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14
              MR. STEELE: I do.
15
          (Jesse Steele is sworn.)
              HEARING OFFICER WEBSTER-HAWKINS: Mr. Delano?
16
17
              MR. DELANO: I do.
18
              HEARING OFFICER WEBSTER-HAWKINS: Mr. Salyphone?
19
              MR. SALYPHONE: Yes. I do.
20
          (Kenneth Salyphone is sworn.)
21
              HEARING OFFICER WEBSTER-HAWKINS: Mr. Sofi?
22
              MR. SOFI: Yes. I do.
23
          (Ardalan Sofi is sworn.)
24
              HEARING OFFICER WEBSTER-HAWKINS: Mr. Greenberg?
25
              MR. GREENBERG: Yes. I do.
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(Alvin Greenberg is sworn.) 1 2 HEARING OFFICER WEBSTER-HAWKINS: And Ms. Chu? 3 MS. CHU: Yes. I do. 4 (Huei-An Chu is sworn.) 5 HEARING OFFICER WEBSTER-HAWKINS: Okav. At this 6 time, I know that this was a panel that the Committee 7 convened, and so the parties may or may not have opening 8 statements on the topics and questions posed by the 9 Committee, but I will give each of the parties an 10 opportunity to make an opening statement. 11 So starting first with Applicant. 12 OPENING TESTIMONY BY CURT HILDEBRAND 13 MR. HILDEBRAND: Thank you. 14 My name is Curt Hildebrand. C-U-R-T 15 H-I-L-D-E-B-R-A-N-D. I'm Senior Vice President with 16 Hydrostor. Together with Victor Grille, Lucas Thexton, 17 Samrat Mohanty, and David Stein we will comprise the panel 18 of experts for the subject areas of facility design, 19 facility reliability, as further detailed in the previously 20 filed Applicants witness list. 21 My opening statement today addresses topics identified in the order filed by the Committee on August 22 23 18th, 2025 with respect to facility design, including the 24 first of its kind nature of the Willow Rock Energy Storage 25 Center and the feasibility of the project design at the

proposed site. I will also be presenting an overview of many of the project benefits that would result from the successful certification, construction, and operation of the project. My fellow panel member, Lucas Thexton, will provide additional opening statement with respect to facility design as well as certain topics related to the topic of geology.

I'd like to begin with a brief overview of some of the project benefits that would accrue in the event that this project is certified, built, and operated.

We talked about a lot today the Kern County being the energy hub of California and the west. Again, just to reiterate the importance of that fact, that is indeed why Hydrostor sited the Willow Rock Energy Storage Center in Kern County. It is the largest renewable energy producing county in the nation. Over 80 billion dollars has been invested to date in renewable energy sector. Kern is home to the largest wind project in the United States. It's also host to the largest solar and plus storage project. Over 22,000 megawatts of wind and solar has been permitted in Kern County to date.

Part of the advantage of locating strategically here in Kern County was to facilitate the further integration and utilization of intermittent renewable resources. Willow Rock will help to, one, minimize

expensive curtailment and/or out-of-state export of intermittent renewable energy generation, and two, maximize the net utilization of renewables through off-peak energy storage and on-peak energy generation.

More specifically, in terms of the benefits to reliability and advancement of the state's climate policies, our A-CAES technology provides the following beneficial attributes that are critically important in the operation of a reliable grid. Willow Rock will provide greenhouse gas emissions free spinning reserve, flexible capacity with a fast start time, peaking energy for local contingencies, voltage support in primary frequency response, superior transient response attributes. Current utility scale lithium-ion battery storage projects typically cannot replicate many of these critical grid reliability attributes.

Some of the economic benefits from Willow Rock. We've talked about a few of these today. Willow Rock will provide an average of approximately 275 construction jobs during the approximately five-year construction and commissioning phase of the project. The construction workforce will peak at an estimated 750 construction jobs. The project will require over two million person-hours of construction labor. The construction payroll for the project is estimated between 400 and 450 million dollars.

Willow Rock will provide approximately 40 full-time jobs during normal plant operations and maintenance.

The project will pay sales tax and local taxes, and unlike renewable technologies like solar, our project is not exempt from local property tax obligations.

Accordingly, Willow Rock will generate significant revenue in the form of annual property tax payments to Kern County based on a projected capital cost of approximately 1.5 billion dollars for the project.

Direct and indirect economic benefits over the project life are estimated to exceed 500 million dollars, and the project has been found to not significantly impact local housing, education, or emergency response resources.

Willow Rock is looking forward to a final CEC decision before the end of this year. The original AFC was filed in December 2021, and our supplemental AFC was filed in March 2024, 17 months ago. We are pleased to be so close to reaching a final decision.

And why is that final decision and its timing so important? Willow Rock remains on track to receive a 1.76-billion-dollar loan guarantee from the United States Department of Energy Loan Program Office. It's a loan guarantee, not a grant. Willow Rock is also on track to receive approximately 50 percent of the project capital costs in federal tax investment tax credits. Both those

provisions survived the latest One Big Beautiful Bill in Washington D.C., and we have a number of conditions precedent to meet with the Loan Program Office. That deadline is January 6th, and one of those conditions precedent is the decision that is before this Commission.

I also want to emphasize that those federal incentives will accrue to the rate payers of California. We are not going to be putting those in our shareholders' pockets. Those are actually going to be beneficially passed through to our customers in the form of reduced rates.

Some of the environmental land use and infrastructure attributes of the project. We've minimized the land use. Impacts will be sited on compatibly zoned parcels in a very sparsely located sparsely populated area. No schools, parks, or recreational areas or other sensitive land uses immediately adjacent to the site, and the project is consistent with all applicable laws and land uses.

As a point of reference, 500 megawatts of new solar PV would require the use of approximately 3,000 acres of land, or almost five square miles. The 500-megawatt Willow Rock project will be sited on less than 100 acres.

The project will not be drilling new groundwater wells nor utilizing groundwater during construction or operation. Antelope Valley East Kern Water Agency will be

the sole purveyor of water to the project. The project avoids the impact to water features protected by the Lahontan Regional Water Quality Control Board, CDFW, and the U.S. Army Corps of Engineers. It avoids impacts to species protected by U.S. Fish and Wildlife Service, and it supports a regional concrete aggregate facility and industry for many years by providing excavated rock for beneficial reuse by local and regional mining facilities.

The project further will be providing 1.9 million dollars in direct funding to Kern County to purchase a fully equipped urban search and rescue unit, including necessary equipment for use by East Kern County. Further, Willow Rock will provide upwards of 2.4 million dollars to offset training and staffing costs during the construction phase of the project, prior to its operational phase when full property tax payments will be paid to Kern County.

We agreed to conditions with the county to encourage local hire for the project, and will encourage all contractors to hire at least 50 percent of our workers from local Kern County communities, and we will continue to work with the county to determine how to best maximize the beneficial use of our sales and use taxes paid by the project.

I wanted to mention our community outreach and support. You heard from some of our community members

today who we've kept well informed over the past four years as we've developed this project. We've gone into this with eyes wide open. Our team will live, work, and play here in Kern County in the event that we do go into construction and operation. Over the last four years we've invested substantial time and resources to educate, inform, and engage with the local community. In doing so we've grown in our care and commitment to serving the needs of East Kern's diverse communities.

While the project is sited nearest Rosamond, we also engage with surrounding communities in California City, Mojave, Boron and Tehachapi. We've, as I mentioned, spent a lot of time and resources on this effort. We've attended over 400 public meetings over the last four years and made at least 50 presentations and site tours to local community members. We average about seven to ten community meetings per month, and this considerable outreach effort has also, as Ms. Oviatt explained earlier, earned the conditional support from the full board of supervisors of Kern County. We're proud to have earned this support, and we look forward to building on it in the future.

Moving on to facility design and reliability.

The Willow Rock Energy Storage Center will utilize

Hydrostor's patented advanced compressed air energy storage

technology also known as A-CAES. A-CAES projects store

off-peak power and generate carbon-free electricity through the expansion of compressed air that is stored in purpose-built subsurface storage caverns. The subsurface cavern construction methods size and operational parameters are all consistent with those utilized by numerous similar storage caverns in use today in the U.S. and around the world. Many of these existing storage caverns have been in safe and dependable operation for 50 years or longer.

The major plant rotating equipment including air compressors, turbo expanders, heat exchangers and generators will all be sourced from industry-leading tier one original equipment manufacturers, or OEMs. All prospective OEMs will be required to provide bankable long-term performance guarantees and warranties for all major equipment. Hydrostor's A-CAES energy storage systems use these proven technologies in innovative combinations to supply a safe and reliable long-duration energy storage required to advance California's clean energy and climate policy objectives.

At 500 megawatts of capacity and eight hours of storage, Willow Rock represents the first utility scale A-CAES project proposed in the United States. While this project will be the first of its kind at this scale, it is important to emphasize that the project, our A-CAES design, will utilize standard and proven equipment throughout the

plant. Standard design pumps, compressors, heat exchangers and related facilities all have decades of successful operational history. We are not waiting to invent a new machine or technology to accommodate our A-CAES project. These are standard off-the-shelf equipment that we will be utilizing.

Willow Rock's mechanical and electrical equipment will be extremely similar to that currently being utilized throughout the oil and gas refining pipeline and power generation industries. This vast workforce familiarity with A-CAES plant equipment and operations will provide excellent future career opportunities for workers in these industries as California transitions away from fossil fuel use and towards a carbon-free and more reliable grid.

Next I'd like to move on to a discussion on geology. Willow Rock must be located above or very near suitable geologic formations in order to safely construct and operate the project's subsurface storage cavern.

Additionally the subsurface storage cavern must be located in close lateral and horizontal proximity to the surface reservoir and to the A-CAES topside facilities. The reason for this is that the cavern needs physical piping and conduit connections for the conveyance of water to and from the water reservoir and similarly for the conveyance of air to and from the A-CAES topside facilities.

Next I will address feasibility of the project design at the current site. In order to provide 500 megawatts of efficient, quick starting, and flexible generation proposed by Willow Rock, the underground facilities for compressed air storage must be located in an area with specific geologic characteristics.

The four primary geologic characteristics include the following. Firstly, the geologic resources must have suitable overburden characteristics, such as limited thickness and constructible soil type. Overburden is the soil and rock formation between the roof of our cavern and the ground surface. It comprises all of the rock and soil that the shafts must transmit through. Sites must be selected where not only the cavern host rock geology at cavern depth is suitable for compressed air energy storage, but also where the overburden above the cavern are also suitable for shaft construction and operation.

Secondly, the deep subsurface geologic formation -- and again we typically target between 2,000 feet in depth and 2,500 feet in depth. There are pluses and minuses to going either shallower or deeper. I'd be happy to respond to any questions that you may have in that regard. We have found our sweet spot in the 2,000-to-2,500-foot depth range. For Willow Rock, we currently expect the cavern horizon to be at or about 2,050

feet in depth.

That subsurface geology at cavern depth must have satisfactory geologic and engineering characteristics that are required — at the required depth to support construction of the excavated storage cavern. The host rock geology must be deep enough to support a sufficiently small and economical cavern volume, as well as support the topside facility design. Shallower caverns result in lower storage pressures and larger volumes of not only stored air, but also the air that passes through the pipes, heat exchangers, and turbo machinery of the facility are thereby increasing their sizes and costs. Conversely it must be shallow enough to be compatible with the topside plant pressure tolerances as deeper storage caverns result in higher pressures.

And again, if folks are interested, I do have an actual core sample with me here. TSA doesn't like me bringing this on planes, but I got it here anyway. This is an actual core sample from our Willow Rock site. I'll let our true licensed geologist describe it in more detail, but I'll call it granite.

Third, we look for very low rock permeability in our deep subsurface geologic formation, and it's necessary to retain the water and the air under pressure within the excavated storage cavern. We're basically constructing an

underground storage tank that needs to be relatively airand watertight, so very low permeability rock is what we're in search of.

The permeability itself is a direct measure of the ability of water or air to permeate through a rock mass. Host rock with very low permeabilities lead to low or manageable water inflows during construction. Very low host rock permeabilities are essential to ensure that any compressed air leakage into the host formation is extremely low or negligible in order to maintain efficient plant operations.

Fourth, the host geology formation must possess competent engineering characteristics in order to sustain an excavated storage cavern at depth intact indefinitely, and allow for repeated compressed air injection and discharge cycles over the life of the project without eroding or collapsing. Willow Rock has all these required geologic conditions.

Specific evidence of the record supporting this opening statement and the topic area of facility design and the feasibility of the project design at the current site include the following exhibits: Exhibit 1000, page 6-2; Exhibit 1002, PDF pages 13 through 15; Exhibit 1003, PDF page 2-5; Exhibit 1005; exhibit 1032, pages 6-3 through 6-4 and 6-8; Exhibit 1033, pages 2, page 2-34; and Exhibit

1233, pages 109 and 110.

Next I would like to introduce Lucas Thexton to provide his first opening statement.

OPENING TESTIMONY BY LUCAS THEXTON

MR. THEXTON: Thanks, Curt.

My name is Lucas Thexton and I'm the Engineering Manager for Hydrostor. Together with Victor Grille, Curt Hildebrand, Samrat Mohanty, and David Stein, we comprise the panel of experts for the subject area of facility design and facility reliability as further detailed in the previously filed Applicants witness list.

My opening statement today addresses topics identified in the order filed by the Committee on August 18th, 2025 with respect to facility design, specifically the engineering assessments of the characteristics of the subsurface geological resources at the current site that support the feasibility of construction and operation of a 500-megawatt A-CAES facility, the basis for the expected integrity of the cavern, the reliability of the facility's operation over the 50-year lifespan of the project, and the engineering assessments that support the representation that the facility will be available to operate at full load at least 95 percent of the time. I will have a separate opening statement for the topic area of geology.

First I will address the engineering assessment

of the subsurface geological resources, characteristics that support the feasibility of construction and operation of a 500 megawatt A-CAES facility. The subsurface geologic formation at the project site has undergone comprehensive characterizations including permeability and strength testing to confirm its suitability for compressed air containment via impermeable double-line shaft and storage within the deep underground cavern space. The integrity of both of these will be maintained throughout the projected operational life of 50 years or longer.

To characterize the site, eleven shallow exploratory boreholes and six deep exploration boreholes have been drilled to define the subsurface geology.

Comprehensive in-situ field and laboratory characterizations during the exploration indicate the presence of a massive subsurface quartz monzonite pluton at the project site. This is effectively impermeable.

The underground storage cavern at Willow Rock will be hosted in massive quartz monzonite at a depth of approximately 2050 feet below ground level where the rock has been characterized to be nearly impermeable. The permeability is less than 5-to-the-negative-9-meters per second. The formation has been shown to be devoid of significant alterations and endowed with high intact strength. UCS strength has been tested at approximately

15,000 psi. These attributes will ensure structural and functional integrity of the storage cavern and shafts during operations without risking the migration of injected air or any other fluids.

Secondly I will address the basis for the expected integrity of the cavern. Properly designed and constructed underground storage caverns are extremely reliable with no need to re-enter after construction. The proposed caverns again will be built in massive quartz monzonite. The local conditions have been evaluated based on the in-situ testing program as well as core extraction and testing. The results indicate that the proposed cavern horizon is part of a massive crystalline formation of very robust integrity. Strong crystalline rocks do not suffer from long-term creep deformation issues, as can be associated with soft caverns.

The massive quartz monzonite will also provide a very reliable and non-deforming formation to host the double-steel grout line concrete shafts without the deformation that sometimes damage well casings in salt caverns and other formations. The wells and the storage cavern will be designed using state-of-the-art analytical and numerical modeling techniques to ensure the structural integrity for the design life while maintaining injection fluid containment. The shafts in the cavern will be

constructed using industry best practices.

The storage cavern is also to be constructed significantly below the surface and thus will not be impacted by surficial seismic waves.

Third I will address the reliability of the facility's operations life over the proposed 50-year lifespan of the project. The cavern is designed for long-term global stability throughout the operational life of 50 years and is designed to not be re-entered during the operational phase of the project. The formation has been shown to be massive and competent enough to maintain long-term stability. The near isobaric operational pressures of approximately 900 psi of the fluids within the cavern --which is water and compressed air -- will have additional confining and stabilizing effects on the cavern walls. This further enhances the cavern's structural integrity over the operating facility life.

Finally I'd like to address the statements that the facility will be available to operate at full load at least 95 percent of the time. The Willow Rock facility is designed to be able to operate at full load at least 95 percent of the time and is intended to operate for 50 years. Operation and maintenance procedures will be consistent with industry standard practices to maintain the useful life of the plant components to support this design

life and plant availability.

Specific evidence in the record supporting these opening statements and the topic area of facility design and facility reliability include the following exhibits: Exhibits 1026 through 1031; Exhibit 1032, pages 6-3 through 6-4 as well as 6-8; Exhibit 1033, pages 2-34; Exhibits 1026 through 1031; Exhibit 1119 pages 7 as well as 17 through 19; Exhibit 1135, pages 12-17; Exhibit 1193; Exhibit 1194 through 1200; Exhibits 1200 through 1209; and exhibits 1222 through 1232.

Next I would like to introduce George Wegmann to provide his opening statement.

OPENING TESTIMONY BY GEORGE WEGMANN

MR. WEGMANN: Thanks, Lucas.

My name is George Wegmann and I'm a Vice

President and Geologist for WSP USA. Together with Lucas

Thexton and Samrat Mohanty, we comprise the panel of

experts for the subject area of geology as further detailed

in the previously filed Applicant's witness list.

My opening statement today addresses two subtopics identified in the order filed by the Committee on August 18th, 2025 with respect to geology. Specifically the seismically active geologic environment and potential hazards identified in geology paleontology and minerals and proposed conditions of certification, Geo-1 and Geo-2.

Lucas Thexton will have an additional opening statement for the topic area of geology.

The project is located in the Mojave Desert geomorphic province of California within the Rosamond Hills of Kern County. The region is geotechnically characterized by quaternary alluvial deposits overlying quartz monzonite bedrock, and as Curt alluded, most people view that as granite. And the site lies between two major fault systems, the Garlock fault and the San Andreas fault, placing it in a seismically active area. Potential geologic hazards associated with ground rupture, seismic ground shaking, seismically induced ground failure, landslides, and soil erosion would be mitigated to less than significant through design, grading, and construction by the implementation of CoCs Geo-1 and Geo-2.

CoC Geo-1 requires the project owner to complete and submit a geotechnical and geohazard report to the CEC for review and approval. The report will include final grading and facility design refinements to mitigate the impacts of geologic hazards on the project and the project's impacts on geologic hazards to less than significant. The refinements will be incorporated into the final design.

CoC Geo-2 requires the proposed underground structures, the cavern, and vertical shafts to be designed,

excavated, and constructed with appropriate civil and structural design criteria, including LORS referenced in Supplemental AFC Appendix 2A Engineering Design Criteria. Specific evidence in the record supporting this opening statement and topic area geology include the following exhibits: Exhibit 1033 and Exhibit 1233.

Next Lucas Thexton will provide his opening statement addressing the other geology subtopics.

MR. THEXTON: Thanks, George.

Again, my name is Lucas Thexton. I'm the Engineering Manager for Hydrostor Inc. Together with Samrat Mohanty and George Wegmann, we comprise the panel of experts for the subject area of geology.

Together with Jesse Steele and Victor Grille, we comprise this panel of experts for the subject area of worker safety, as further detailed in the previously filed Applicants witness list.

My opening statement today addresses subtopics identified in the order filed by the Committee on August 18th, 2025, with respect to geology and worker safety, specifically the seismically active geologic environment, the integrity inspection program for the excavated underground structures in Geo-3, as well as best practices and standards for the forthcoming controlled detonation plan anticipated for Worker Safety 5.

Firstly I will address the seismically active geologic environment as it relates to the underground storage cavern for the Willow Rock Project. The risk of damages due to earthquakes is primarily restricted to surface or very near-surface structures. Studies estimate that little damage occurs to underground openings at depths greater than 200 to 300 feet, except for where a tunnel intersects a fault directly affected by the earthquake. No faults will intercept the proposed storage cavern or shafts, and the nearest fault is approximately 1.3 kilometers away from the project site.

Studies state that no damage occurs in deep rock tunnels for peak ground accelerations less than 19 percent of the acceleration due to gravity, and only minor damage occurs for peak ground accelerations between 0.19 g and 0.5 g. Peak ground acceleration is by far the most widely accepted index of ground shaking intensity and damage from earthquakes. Thus heavy earthquake damage can be sustained by surface buildings, while any deep ground under excavations can remain mostly unharmed.

The project site is in a region where the likelihood of a damaging earthquake in the next 100 years is high. Furthermore, the peak ground acceleration within a two-percent probability of exceedance in 50 years was determined to be 0.39 g using applied technology counsel

software. This assumes a site amplification factor at peak ground acceleration of 0.8 for a Class A site material. As per ASCE 7-10, site Class A material includes hard rock with shear wave velocities of greater than 5,000 feet per second. Based on the peak ground acceleration values, earthquake damage to a cavern at the proposed cavern target depths is expected to be minor. In this case, minor damage due to shaking includes some roof fall and the formation of minor cracks.

Second I will address the integrity inspection program for the excavated underground structures in Geo-3.

During the cavern construction, when all the muck has been transported away from the face, the crown and side walls are scaled, inspected, and reinforced using an approved support plan. During this process, the face is inspected by a supervisor for hazards before the mining cycle is repeated. Upon completion of the cavern construction activity the entire cavern will be surveyed, and all mining equipment, infrastructure, and debris will be removed. All shafts will be stripped of supporting infrastructure and steel shaft liners will be installed for use in A case operations. Any shafts that are not repurposed for use in case operations will be plugged and abandoned prior to cavern testing. This will follow industry standard approaches.

After shaft conversion and plugging is completed, pressure testing of the cavern will be performed above the proposed cavern operating pressure to ensure containment has been achieved. A hydrostatic pressure of approximately 2 bar above hydrostatic is proposed for this test. This is standard for the testing of storage caverns.

The cavern is designed for long-term global stability through the operational life of 50 years or longer. It is designed not to be re-entered upon completion of construction for the entire operational phase of the project. Regular inspections of the shaft liners will be performed throughout the facility life.

Preliminary inspection plans propose a five-year inspection interval for both shafts.

Third I will address the best practices and standards for the controlled detonation plan described in Worker Safety 5.

By way of background, controlled detonation will be carried out at a depth of approximately 2,050 feet below the ground for cavern construction. Shaft construction for this project will be performed through one of two methods: either blind boring, which is detonation-free, or through conventional sinking, which would involve controlled detonation in the competent bedrock starting from approximately 70 feet below the ground surface down to the

cavern level.

For a conventional sinking approach, a surface casing made of steel will be installed for the upper 70 feet in the unconsolidated zone, and this will be achieved using conventional digging equipment.

Worker Safety 5, as proposed in the Final Staff
Assessment, identifies and lists the appropriate best
practices and standards for the controlled detonation plan.
Specific evidence in the record supporting this opening
statement and the topic area of geology include the
following exhibits: Exhibit 1039, Appendix 2a; Exhibit
1120, Page 9; and Exhibit 1135, Pages 12 to 14.

Next I would like to introduce Jesse Steele to provide his opening statement.

OPENING TESTIMONY BY JESSE STEELE

MR. STEELE: Thanks, Lucas.

My name is Jesse Steele. I'm the Assistant Vice President of Environment, Health, and Safety for WSP.

Together with Victor Grille, Curt Hildebrand,
Lucas Thexton, Samrat Mohanty, and David Stein, we comprise
a panel of experts for the subject area of worker safety,
as further detailed in the previously filed Applicant's
witness list.

My opening statement today addresses the specific topics identified in the order filed by the Committee on

August 18th, 2025, with respect to the minimization and mitigation of exposure risks for on-site personnel and the general public from Valley Fever in the Valley Fever Management Plan that we prepared pursuant to the proposed conditions of certification Worker Safety-7 and PH-1.

So Valley Fever is a fungal infection caused by fungus spores, typically found in topsoil. If present in the soil, the fungus spores can become airborne as a result of soil disturbance. Valley Fever can result from breathing spores. Therefore, measures set forth in existing laws, specifically Labor Code Section 6709, as well as applicable regulations, set forth in Title VIII of the California Code of Regulations, and guidance from Cal/OSHA and California Department of Public Health, focus on exposure prevention methods, including dust suppression, hygiene measures, and wearing a respirator when exposure to dust cannot be avoided. These exposure prevention methods are utilized to minimize the transport or inhalation of spores present in dirt, soil, and dust, whether present on equipment, clothing, or people.

As identified in the Cal/OSHA citation identified on page 4.4-32 of Exhibit 2000, Cal/OSHA recommends the adoption of site plans, controls, and work practices that reduce workers' exposure. The measures contained in Worker Safety-7 and PH-1 are consistent with the measures

recommended by Cal/OSHA, California Department of Public Health, and the Center for Disease Control.

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Worker Safety-7 and PH-1 contain exposure prevention measures identified by relevant health agencies to reduce and minimize the potential exposure to Valley Fever. Measures identified in Worker Safety-7 and PH-1 all work together to minimize potential exposure to Valley Fever through including dust control methods to minimize the occurrence of dust in the first instance; to minimize the potential spread, exposure, or inhalation of fungal spores if they are so present in the dust; cleaning procedures for equipment, vehicles, and other items prior to being moved off-site to minimize the potential transmission of Valley Fever; the use of enclosed cabs for equipment to isolate workers from potential exposure; worker awareness training, consistent with applicable laws, so that workers are not only informed about the potential signs and symptoms of Valley Fever but the methods to limit transmission.

While the Applicant believes that the measures identified in Worker Safety-7 and PH-1 as proposed in the FSA are appropriate and sufficient to minimize potential risks from Valley Fever, the Applicant and Intervenor, California Unions for Reliable Energy, CURE, agreed to the addition of two further measures to address Valley Fever.

Half-face respirators equipped with N100 or P100 filters shall be made available to on-site workers during construction-related earth-moving activities. During construction phases involving earth-moving activities, workers shall be provided with coveralls daily, lockers, or other systems for keeping work and street clothes and shoes separate, and daily changing and showering facilities. Clothing should be changed after work every day, preferably at the work site.

This first measure is consistent with PH-1 as proposed in the FSA which provides that on-site personnel should be trained on the proper use of personal protective equipment, including respiratory equipment. The National Institute of Occupational Safety and Health -- NIOSH -- approved respirators shall be provided to on-site personnel upon request.

When exposure to dust is unavoidable, we provide NIOSH-approved respiratory protection to affected workers. If respiratory protection is deemed necessary, employees must develop and implement a respiratory protection program in accordance with Cal/OSHA's respiratory protection standard, Title VIII, CCR 5144.

The effect of the Applicant's and CURE's proposed language is that specific filters, N100s and P100s, be made available to workers. The number 100 generally signifies

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that 99.97 percent of particles can be filtered. An N
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    filter rating means that the filter is not resistant to
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    oil, whereas a P filter rating means that the filter is
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    resistant to both oil and non-oil contaminants and
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    particulates.
              Specific evidence in the record supporting this
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    statement and the topic area of Valley Fever include
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    Exhibit 1233, page 25; Exhibit 1032, pages 5.17-2 to
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    5.17-7; and Exhibit 2000, pages 4.4-18 through 4.4-19,
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    4.4-28, 4.4-32 through 4.4-34, and 5.10-18 through to 5.10-
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    21.
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              Thank you.
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              HEARING OFFICER WEBSTER-HAWKINS:
                                                 Thank you.
              Does that conclude the Applicant's opening
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    statements? Thank you.
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              Turning to staff.
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              MR. BABULA: Good news. Staff does not have any
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    opening statements. We're available to answer questions,
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    but we felt that this topic was basically the Applicant's
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    best position to sort of address these topics.
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              HEARING OFFICER WEBSTER-HAWKINS:
                                                 Thank you.
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              So with that, I will turn it over -- oh. Yeah.
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              I'm sorry. The Intervenor, do you have an
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    opening statement?
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              No?
                   Thank you.
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Commissioner McAllister, do you have any questions for the experts?

DIRECT EXAMINATION

COMMISSIONER MCALLISTER: So I really appreciate all the comprehensive statements and just the extensive record that you've built.

And I think part of the reason I wanted to -- we, the Committee -- we wanted to hear on this topic is just related to the innovative nature and the scale of this project. I think, you know, Mr. Hildebrand, you sort of I think maybe got ahead of your closing statement at the first part of your opening comments. So, you know, talking about the benefits to California potentially for such a project. Which, you know, I agree storage is a very key piece of our puzzle as we transition to 100 percent carbon-free resources. And also just given, you know, the history and evolution of this project, and the fact that there was a site kind of chosen that sort of didn't pan out, and you did not find the technical -- all the specific technical criteria that you laid out for what constitutes a good site.

So I'm certainly not asking here for anything new in the evidentiary record, but I did want to just ensure that we have a discussion that helps make sort of more concrete our understanding of the project, and maybe talk

about the sort of implementation and planning and Commissioning, you know, which your statements covered pretty well, and then operational life of the project.

So I guess just to start, I don't have a lot of questions, but I wanted to -- I certainly appreciate all the references to the specific places in the record that all of you detailed.

So to your knowledge is a cavern of this size, you know, almost a million cubic yards of volume, sort of been excavated. You know, we know not for a project like this because this is the largest of its kind, but I guess trying to anticipate sort of the novelty of just the fact of using the techniques that the experts described for opening up a cavern of this size in granitic rock. And, you know, I think we all understand that granitic rock is extremely hard and stable and impermeable.

But I guess I'm -- you know, are there models to look at? Are there templates? Are there previous experiences of this kind of an excavation project that you are relying on for sort of an experiential base?

MR. HILDEBRAND: The simple answer, Commissioner is yes, and for the more complex answer, I'm going to turn it over to Lucas.

There are literally dozens and dozens of similar -- larger, smaller -- similar sized caverns,

1 typically utilized to hydrocarbons across the globe. 2 They've been in operation for many, many decades safely, 3 reliably operated. 4 And with that intro Lucas, would you like to 5 respond? 6 MS. NEUMYER: And Lucas, I apologize. This is 7 Samantha Neumyer. Before you speak, I do want to direct the Committee's attention to Exhibit number 1005. 8 9 MR. HILDEBRAND: Great. Thanks for that. MS. NEUMYER: And if you go to pdf page six --10 11 well, I don't know if we actually have to look at it on the 12 screen, but at least if you want to go back and look at the 13 record and the information that has been submitted. 14 And then Lucas if you could also respond to the 15 Commissioner's questions, please. Thank you. 16 MR. THEXTON: Yeah. Thanks, Samantha. Thanks, 17 Curt. 18 There is, you know, hundreds of underground 19 storage caverns that have been built in hard rock before. 20 We will not be the largest one from a volume perspective, 21 so there is strong, strong precedent for this type of 22 structure at this scale. 23 The techniques that are used for designing the 24 cavern openings and for mining the cavern itself have been

employed successfully hundreds of times in this

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application, as well as in the mining industry. So we really aren't doing anything new in terms of cavern design or cavern delivery.

COMMISSIONER MCALLISTER: I appreciate that. We're looking at the exhibit right now, so thanks for that.

MR. MOHANTY: Mr. Commissioner, I would like to probably add to that. Samrat Mohanty from Hydrostor.

COMMISSIONER MCALLISTER: Yes. Go ahead.

MR. MOHANTY: So I have been involved with a bunch of these cavern projects in my past life. I was the principal designer for a similar -- not a similar -- larger-volume cavern in Singapore called the Jurong Island Caverns, and the depths were kind of similar, although the geology was metamorphic. The cavern volumes were in the order of 1.3 million cubic meters, whereas ours is in the 600 cubic meter range.

And the dimensions of those caverns were 20 meters by 25 meters in, you know, width and height. In comparison, we are only in the 40 by 55 feet size when it comes to the storage space.

So much larger caverns of similar functionalities and much greater capacity have been designed and constructed globally, and I have been fortunate to lead a bunch of these projects.

COMMISSIONER MCALLISTER: Great. Okay. Thanks

for those answers.

In terms of the uses of sort of the cycling, the daily cycling, I understand it's virtually isobaric. Are there -- in terms of just, you know, daily cycling, we're likely to see, you know, in the ramp every day. We're going to need that most of the year and certainly at critical peaks for during various seasons of heat waves, et cetera. Like, that's what the grid needs.

Do you have any sort of understanding of whether the daily cycling, even though it's isobaric, I could see if the pressure were changing a lot, maybe that would be much more difficult to manage. But still, a 50-year lifetime cycling every day, sort of, you know, routinized filling and emptying of this.

Do you anticipate any sort of impacts of that kind of cycling on the caverns or the preparations?

MR. MOHANTY: Yes. The simple answer is no.

COMMISSIONER MCALLISTER: Okay

MR. MOHANTY: The pressure fluctuation band is in the 20-25 psi range. And there has been tons and tons of studies on cyclic -- impacts of cyclic loading on rock strength. So unless the cyclic pressure variation band reaches 50-60 percent of the rock strength, even then tens of thousands of cycles are permissible. But when you compare the 20-25 psi pressure radiation band to almost

15,000 psi of rock strength, it does not even come close to 50 percent.

COMMISSIONER MCALLISTER: Okay.

MR. MOHANTY: So an infinite number of cycles are possible without engendering any rock fatigue.

COMMISSIONER MCALLISTER: Great. Anybody else want to answer that at all or chime in? No? Okay.

Thanks for that answer.

And then final question. So with reference to sort of the ongoing oversight of the project sort of, you know, through construction, but then once it goes into operation, at these inspection intervals that are specified in Geo-3, what would an example of something that an inspection would uncover look like that would cause enough concern that would -- you know, what would something of concern look like? Like, what would you -- like, in those inspections, you know, if there were something to come up, what would that be in your estimation? Sounds like you think it's a low probability, but the inspections are there for a reason.

What sorts of things might those inspections turn up?

MR. MOHANTY: A significant closure or collapse of the shafts, those would be something that would be of concern for the longevity and the operational -- planned

1 operational phase of the project. Tiny deformations in the 2 shafts are almost expected without compromising the 3 integrity -- structural integrity of the shafts or the 4 wells, but nearly full collapse would be compromising the 5 operational function of the facility. 6 COMMISSIONER MCALLISTER: In your estimation, 7 would that be sort of towards the surface in the shaft or sort of, you know, somewhat below the lined part of the 8 9 shaft or where would that typically occur -- likely occur? 10 MR. MOHANTY: Well the entirety of the shafts 11 will be lined from the surface to the cavern level. 12 I mean, first of all, the design that we are 13 invoking at the moment, it has adequate conservatism, 14 adequate redundancy to preclude such events from happening, 15 but there is no definitive answer as to where that could 16 be. Potentially close to the bedrock-soil interface, if 17 there is a massive seismic event, then remediating, 18 rehabilitating the upper 65, 70 feet of the shafts would be 19 relatively easy. 20 MS. NEUMYER: Commissioner McAllister, this is 21 Samantha Neumyer. I apologize. 22 COMMISSIONER MCALLISTER: Yes. Go ahead. 23 MS. NEUMYER: I just want to also add that Samrat 24 Mohanty's resume --25 COMMISSIONER MCALLISTER: Yes.

MS. NEUMYER: -- was the exhibit that we 1 2 previously filed earlier today, and I'd also like to make 3 sure that we check in with Mr. Thexton as well, because he 4 is the additional expert on this topic, and I keep seeing 5 him flash up on the screen. COMMISSIONER MCALLISTER: Sorry about that. 6 7 MS. NEUMYER: Just to see if he also has something to say as well. And he provided the opening 8 9 statement, so I want to make sure that we give him a chance 10 to weigh in as well, please. 11 Thank you. 12 COMMISSIONER MCALLISTER: Okay. Yeah. 13 Go ahead, Mr. Thexton. 14 MR. THEXTON: No problem. Thanks, Samantha. 15 Samrat had adequately covered the past two topics but, you know, to reiterate, the real element that the 16 17 inspection program will be focusing on is our shafts. 18 Those will be inspected on a regular interval to ensure 19 liner integrity is being maintained. 20 As Samrat noted, you know, really only major 21 events would impact the liners based on the level of 22 conservatism that we have, but we will be performing 23 regular inspections to ensure that that containment

COMMISSIONER MCALLISTER: Okay. Thanks for that.

integrity is being maintained.

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And there's no issue with sort of having -- you know, so as the level changes in the caverns, you've got, you know, wet coming up and down. You've got dry, you know, air down below. I mean, nothing of concern there? I mean, it's granite, so --

MR. MOHANTY: No. This is one of the most stable, chemically stable minerals that you can find anywhere in the planet, and that cyclic wetting and drying would not really lead to any leaching erosion, but we have studies ongoing at the moment to study more about all of that.

COMMISSIONER MCALLISTER: Great. So the opening statement sort of made clear that you think that it's a monolithic structure down there. I'm assuming you'll be confirming that along the way and working with the DCBO and implementation oversight staff to make sure that that is actually the case as you open up the caverns.

MR. MOHANTY: Yes.

COMMISSIONER MCALLISTER: Okay. Okay.

I think those were all the questions I wanted to ask. Yeah.

Thanks a lot. I really appreciate your sort of gathering all of that in the opening statements and covering all the questions that we asked in the filing earlier this week.

1 So yeah. I think my itches have been scratched. 2 MR. HILDEBRAND: Great. 3 COMMISSIONER MCALLISTER: So thanks a lot. 4 I appreciate everybody's weighing in and your 5 expertise comes across loud and clear, so thank you. HEARING OFFICER WEBSTER-HAWKINS: 6 Thank you, 7 Commissioner McAllister, and I want to echo appreciation for the detailed opening statements on the Committee's 8 9 questions and the citations to the record. 10 I have two questions for staff in response to 11 some of that. 12 The first question is in the staff's independent 13 review of all the evidentiary analysis and engineering 14 information that the Applicant has submitted, including 15 that which they've summarized today, was there anything of 16 note from your experts' point of view, particularly on the 17 issue of the 95 percent reliability design goal, you know, 18 that would give staff's experts any pause about the 19 sufficiency of the record in supporting that goal? 20 MR. BABULA: Well, as a cell biologist, I'd say 21 it looks good to me. But I'm going to defer to Mr. Kenneth 22 Salyphone --23 HEARING OFFICER WEBSTER-HAWKINS: Thank you. 24 MR. BABULA: -- to respond to that. Thanks. 25 HEARING OFFICER WEBSTER-HAWKINS: Mr. Salyphone,

1 are you with us on Zoom? 2 MR. SALYPHONE: Yes. I am. I apologize. My 3 phone just got disconnected. 4 Can you repeat the question? 5 HEARING OFFICER WEBSTER-HAWKINS: The question 6 is, after listening to Applicants' opening statement on the 7 Committee's questions, including their summaries of their 8 own technical and engineering assessments that they've 9 included in the record, do you or your colleagues have any concerns about the design plan for this project and the 10 11 project's reliability to be able to operate 95 percent of 12 the time, 365 days a year for 50 years? MR. SALYPHONE: No. It's consistent with --13 14 their practices are consistent with industry standards. We 15 concur with that. 16 One thing I wouldn't agree on is 95 percent at 17 full load for over 50 years. That's pretty bold there. I 18 would say they are available for 95 percent availability. 19 Say if one of the power trains go down, the other three 20 would still be operational. But 95 percent is consistent, 21 just not at full load, I would say. 22 And yeah, that is -- it's also back to my 23 facility reliability section as well, that we don't 24 proclaim full load, we just say 95 percent availability. 25 HEARING OFFICER WEBSTER-HAWKINS: Thank you for

that response, Mr. Salyphone.

My last question has to do with the testimony on the worker safety and public health conditions related to Valley Fever and the Valley Fever Mitigation Plan and whether or not your staff experts have any concerns with -- I know that that was a topic of -- a subject within the agreement, the compromise between the Applicant and CURE, and whether or not your experts have any further comment or want to summarize your expert position and evidence in the record on the issue of Valley Fever prevention.

MR. BABULA: I will defer to Dr. Alvin Greenberg.

HEARING OFFICER WEBSTER-HAWKINS: Thank you. I
thought you would.

And I see his hand raised. If we can unmute Dr. Greenberg's mic and enable his ability to respond to the question.

Dr. Greenberg, welcome.

MR. GREENBERG: Thank you. I'm Alvin Greenberg.

Good afternoon -- or it's almost good evening, commissioners and Hearing Officer.

It's really good to listen to everybody before speaking, and I've learned a lot more about the reliability of the project and the geology, two fields that I'm interested in but not an expert. So I appreciate the opportunity to speak in an area where I am an expert, and

there is one thing I want to mention regarding the agreement between CURE and the Applicant.

First of all I applaud any agreement between an Intervenor and an Applicant, and I think that's a job well done. However it is of course not enforceable by the Energy Commission. It's not included in a Condition of Certification, nor is it written in a manner that could be enforceable, and I believe the Applicant is probably aware that at the very first time an employee, a worker, takes advantage of the opportunity to use the half-face mask respirator with associated filter cartridges, it will trigger one section of Title 8 -- Section 5144 -- and that is Appendix D, D as in delta, which addresses the very issue of when a particular respirator is not required but is provided voluntarily.

So I wanted the Commission and the Hearing Officer to know that it will trigger a Cal/OSHA requirement, and I'm sure the Applicant was aware of that, but I wanted to hear it from them.

20 HEARING OFFICER WEBSTER-HAWKINS: Thank you, Dr. 21 Greenberg.

MR. HARRIS: Would you like a response?

HEARING OFFICER WEBSTER-HAWKINS: Yes, Applicant.

Do you have a response to that?

MR. HARRIS: Yeah. Hi, Dr. Greenberg. It's Jeff

Harris. Good to see you, although you're quite small right now.

Yeah. We do understand that. We understand your position on enforceability. We have reached an agreement with CURE, which you've applauded appropriately, and it is a binding obligation that we will have outside of the four corners of your document. We feverishly took notes on your section, although I didn't know if you were going to come up with dog or delta for the D, but we will make sure that we are very clear with our folks that it has to be part of our overall plan to show compliance with that, because we don't want to see you in compliance. So I'm glad to see you on the screen.

So thank you for being very specific with us, and you are right. You are correct, and we're going to implement that.

MR. HARRIS: So thank you.

MR. GREENBERG: You're welcome, sir.

HEARING OFFICER WEBSTER-HAWKINS: Thank you, Dr.

20 Greenberg.

I believe we've heard from all of the parties, and they're experts on the topic of cavern construction.

Does any party need to offer any additional witness testimony on these topics, as posed by the

25 | Committee?

1 Seeing none? None from staff. 2 MR. BABULA: Yeah. Nothing additional from 3 staff. None from Applicant. None from the Intervenor? 4 All right. So I thank all of the witnesses. 5 You're released from the stand now, and we are finished with the topic of cavern construction. 6 7 So that concludes the testimony. We are going to 8 allow the parties an opportunity to make a closing statement of up to 10 minutes. You do not need to use all 9 10 10 minutes, and to underscore Commissioner McAllister's 11 observation, Mr. Hildebrand may have already presaged the 12 Applicant's closing statement in large part and doesn't 13 need to repeat that. 14 So we are going to go first, starting with staff, 15 then the Center for Biological Diversity, and finally the 16 Applicant. 17 MR. BABULA: All right. Thank you. HEARING OFFICER WEBSTER-HAWKINS: Yes. 18 19 MR. BABULA: This is Jared Babula. 20 And so CEOA recommends that the environmental 21 document of an agency be no longer than 150 pages, and then 22 for a complicated project, 300. In this case, just to be 23 sure, staff did a 1,500-page document to be comprehensive 24 and have a defensible document that is adequate for the 25 Commission to reach a decision on. And so we stand by

that, and now we have a lot of supplemental written or oral testimony to be added to that 1,500 pages.

So today we talked about bio and the fact that the desert regenerates slowly. That was a key aspect to staff's testimony of Mr. Huntley. And because of that slow regeneration, we appropriately considered that the temporary impacts are actually permanent, and recommended mitigation for the special status species of the burrowing owl and the Crotch's bumble bee at a 3-to-1 ratio.

However, we do recognize that if the Applicant is, while they're finalizing their construction process, and they decide to not -- if they don't need the berm, obviously areas that are avoided, we would be open to that not being needed for mitigation, because they're avoiding areas that -- with the redesign.

And then finally, regarding the DSOD, staff is committed to working collaboratively with the DSOD and the Applicant to try to get to a resolution on the fee issue. I think we all agree that DSOD's expertise is going to be needed, and they need to be paid for that, but the exact mechanism is to be determined.

But the end result is, is that the Commission has enough information to make a decision, and just to make sure we don't get lost in the weeds of all these details, the staff's recommendation was for this project to be

approved and to move forward with the construction phase, which will entail a whole other process that staff will be closely engaged with to ensure that all the conditions of certification are correctly implemented and the protections that they provide are consummated.

And so with that, I'm going to end and go to the $\label{eq:Applicant} \mbox{ Applicant or the Intervenor.}$

Thank you.

9 HEARING OFFICER WEBSTER-HAWKINS: Thank you, Mr. 10 Babula and staff.

MS. GRAVES: Zeynep Graves.

HEARING OFFICER WEBSTER-HAWKINS: Ms. Graves.

MS. GRAVES: Intervenor, Center for Biological Diversity.

On behalf of the center, I want to thank the Hearing Officer, the Commissioners, the Applicant, and CEC staff. This process has had plenty of opportunity to present the issues that we saw, and I think the iterative process by being able to comment on the PSA and then again on the FSA and see improvements throughout the process has really helped us narrow issues to the point where we felt we only needed to provide opening and rebuttal testimony on the western Joshua tree issue, so thank you to all parties for your help in that.

I think the one thing I want to leave the

1 Commission and Hearing Officer with is, you know, the 2 western Joshua tree Conservation Act is very clear that 3 take cannot be authorized until there are very specific 4 requirements that must be met, and that includes the 5 comprehensive census of all Joshua trees that may be 6 impacted by the project. So to the extent that, you know, 7 the CEC will approve the project and authorize take of western Joshua trees, I just want to reiterate that it's 8 9 important that we have that complete census in place before 10 the Commission, before take is authorized. 11 And with that, I will hand it over to the 12 Applicant. Thank you. 13 HEARING OFFICER WEBSTER-HAWKINS: Thank you, Ms. Graves, and thank you for the center's participation. 14 15 Applicant? 16 MS. NEUMYER: This is Samantha Neumeyer on behalf 17 of the Applicant. We'd like to thank the Committee for 18 providing us an opportunity to provide an additional 19 closing statement. 20 We really thank you for hosting these evidentiary 21 hearings, particularly in Kern County in the area that will 22 be affected, and in an area that is really important to 23 Hydrostor as a company in the community, as you heard 24 earlier today. 25 I think as you heard by a CEC staff counsel, we

heard from biological resources. We've heard from the experts who -- well, maybe they didn't walk every inch of the project site. They have completed 100 percent of the expected disturbance areas for these facilities. They have characterized the site appropriately. They have told you about the dumping that has occurred for years. And I think it's really important when you consider these mitigation ratios to take those firsthand accounts into perspective.

Next, we do agree that a comprehensive census of all trees that may be affected should be conducted, and we've done it. The record is complete with the information of the western Joshua tree census, and we are happy to provide the citations and the appropriate citations to the record showing our homework. And we've put a lot of work into creating the robust record that Commissioner

McAllister referenced earlier, and we're proud of the work that we've done, and we've been especially proud of the collaboration that we've achieved with the other parties.

I think one important thing to note that has largely gone unstated today is that the parties are in substantial agreement regarding the findings and conclusions of nearly all subject areas and conditions of certification presented in the Final Staff Assessment, with the obvious exception of, you know, the subject areas that you've heard today. We're still continuing to work with

CEC staff counsel and DSOD regarding some of the issues that you've heard, but again, I think that is a huge achievement that should not go unrecognized, and it is indicative of the large amounts of cooperation and hard work put forward by all parties in the proceeding.

And again, we have a couple minor things that we need to do. I know we owe you an errata of the extensive administrative citations that Mr. Stein read into the record today, and we will continue to work with staff on that compendium.

But we look forward to reviewing the presiding member's proposed decision when it is published. We thank the Committee for its leadership and hard work in moving this proceeding forward.

HEARING OFFICER WEBSTER-HAWKINS: Thank you.

So with that, following this evidentiary hearing, we are going to allow optional briefing by the parties at the request of the parties. So any party wishing to file a brief shall do so no later than seven business days after the Court Reporter's transcript from this hearing is filed in the docket.

All briefs shall be limited to 15 pages, shall be in a font size no less than 12 points, and shall not include any attachments. Briefs shall apply the law to only the evidence in the record, providing those additional

cites, if you would like, and siting evidence by reference to the transcript and by exhibits and page numbers.

With that, we are going to offer a final round of public comment.

Mr. Young, will you please facilitate the comment period for this evidentiary hearing?

MR. YOUNG: Thank you.

The CEC now welcomes public comment. All comments will become part of the public record. Please let us know if you'd like to make a comment so we can call on you.

If you want to make remarks on behalf of a California Native American tribe or government entity, the comment will be taken first without a timer. Otherwise comments are limited to three minutes and one speaker per organization. We'll show a timer on the screen and alert you when your time is up.

We're going to start with commenters joining us in person and then transition to our online and phone attendees. If you're joining us here in person, please submit a blue card if you haven't already.

Is there anyone in the room that would like to make a public comment?

All right. I'm going to transition to Zoom.

If you'd like to make a public comment and you're

1 on Zoom, please use the raise hand feature. And for those 2 of you joining by phone, please press star nine to raise 3 your hand and then star six to unmute and mute your phone. 4 Is there anyone that would like to make a comment 5 on Zoom? That's going to conclude the public comment 6 7 period. I will now turn it back to you, Hearing Officer. 8 HEARING OFFICER WEBSTER-HAWKINS: Thank you, Mr. 9 Young. 10 Now we will seek to close the hearing record. 11 At this time, is there any objection to closing 12 the hearing record for this application for certification? 13 Applicant? MR. HARRIS: No objection. 14 15 HEARING OFFICER WEBSTER-HAWKINS: Staff? 16 MR. BABULA: No objection. 17 HEARING OFFICER WEBSTER-HAWKINS: Intervener? 18 MS. GRAVES: No objection. 19 HEARING OFFICER WEBSTER-HAWKINS: The hearing 20 record is hereby closed except the transcript of this 21 hearing, which will be added to the record as soon as it's 22 available. 23 With that, I would like to offer the Committee a 24 last opportunity to provide some closing remarks. 25 Commissioner Gallardo?

COMMISSIONER MCALLISTER: Do you want to go 1 2 first? 3 Yeah, please. 4 COMMISSIONER GALLARDO: Thank you so much, 5 everyone. Again, to the Applicant for being such a great 6 collaborator. To staff for, you know, giving us so much 7 information, much appreciated. And overall, it was nice to 8 be in this special place. So it was an extra treat to be 9 here in the Mojave Air and Space Port where so many folks 10 lived and died to defend and protect us. 11 Also want to honor the community's comments 12 earlier today. We heard from Rick, Joel, Anthony, George, 13 Richard, and Drew, who are all residents, and just really 14 proud of being a leader in energy here in this area and on 15 renewables. And here's a new application where it's 16 possible that they could also be a leader. 17 And I wanted to compliment Hydrostor, given the 18 feedback we heard, that you're being transparent, you're 19 being a good communicator, you're being an excellent 20 neighbor, and providing community benefits beyond what this 21 project would require or would do. So thank you again for 22 that as well. 23 I'll turn it over to my fellow Commissioner. 24 COMMISSIONER MCALLISTER: Great. Thank you,

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Commissioner Gallardo.

So I'll also be brief. I know it's been a long day, but a very productive day. I want to thank the Applicant.

I just would echo Commissioner Gallardo's comments. I mean, clearly you've been embedded in the community, and really, really dedicated to providing community benefits, and it's quite a model for an Applicant and the developer of a large infrastructure project like this. So thanks. We heard that very loud and clear from your partners in the communities impacted. So kudos to you for that fulsome engagement.

And I think our job is not to gauge whether the project's sort of going to succeed in a marketplace for electricity, right? Ours is a pretty prescribed process. And at the same time, you know, I think we do, keeping in the lines -- you know, within the lines of the AFC process, we do also kind of bring along with us the context of California's transition. And so I appreciate the comments to that effect, and kind of helping myself, us as a Committee, understand, you know, locate this project in the trajectory of California's journey to rely on an electric system: an affordable electric system, a reliable electric system, and a low-carbon electric system. So I appreciate that.

And the risk is on the Applicant, right? I mean,

the worst outcome we could see is you do the project and then something doesn't work out, and it's a stranded asset. And, you know, all of us -- if it gets approved, all of us want to avoid that. And so it sort of drives my -- what keeps me up at night is we want to make sure that all of our investments are effective and efficient, efficacious, and contribute to that overall trajectory. So if it is approved, we need it to succeed.

You know, storage, I think you talked about,

Curt, Mr. Hildebrand, you talked about storage being a key

asset. That's absolutely right. I think California is

doing amazing work, but we need diversity of storage, and
this would contribute to that.

I really just appreciate everyone's attention.

This was an incredibly collegial, civil, and productive and substantive hearing, and I really appreciate that. I think really a model for how these things should go, even though not everybody agrees on everything. I think we edged closer to getting sort of agreement across the various parties with the thoughtfulness, and I appreciate that.

And that starts with the Applicant providing a lot of information and really being persistent and responsive throughout this whole process. So I appreciate that.

And I would say the same for staff. Just really excellent job on the staff part. Just your doggedness and

your curiosity and kind of being incredibly committed to getting the work done. I don't know if we have to do, like, a selection of every fifth word to get it down to 300 pages or something. I'm not sure that would make sense, but we can try. AI can do anything, right?

And the Intervenor, the Center, really thank you for all your participation. This is not easy for a small organization or a nonprofit to participate in, and we really appreciate your prioritizing this and bringing your perspective and substantive comments. So thanks for being here today as well.

And the other -- the previous Intervenor here, I think, was also a very positive influence on the process, and so focused on some very, very important aspects of the project. And I think we've heard consistently that the Applicant is committed to respecting the agreement, the contract. Basically, you have an enforceable contract with them. So thanks for that.

The relevant agencies here, Eastern Kern APCD and the California Department of Forest and Wildlife and the Division of Safety of Dams, I really want to commend them for being fully present, giving this attention, and bringing their expertise to the table for up to now and today and then going forward. So really appreciate them.

The county, you know, we all love working with

Ms. Oviatt. She's so on top of things and has such a good perspective and grounded experience. I think a really great interface with the county and the leadership in the county. And Kern really is an incredible place for California to help us with our transition to a clean energy future.

PAO, Ryan and your colleagues, really thank you very much for ensuring that the public can participate.

This can be kind of obtuse. This can be kind of, you know, a difficult process. It's very formalized and not intuitive sometimes. And so I really appreciate, not just in this proceeding, but across the Board, helping the public have access.

The translators, Aaron and Giselle, thank you very much. Really appreciate them sticking with us throughout a long day.

And finally, the Hearing Officer team, Reneé, thanks so much for being the conductor of this orchestra today. You know, I think it sounded reasonably good.

And Blanca and the whole team, really appreciate all of your efforts to keep us moving forward and keep the train moving down the tracks on schedule.

We do have a schedule. I appreciate your pointing out the LPO role and the sort of -- you know, the pieces of the Legos and how they have to fit together. So

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    you know, and I think we all want to get to the finish line
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    here before the end of the year. So we'll do our best to
 3
    do that. And please do avail yourselves of the briefing
 4
    opportunity if you feel you need to, absolutely. And we
 5
    have a lot to roll up and take back and construct a PMPD.
    And really looking forward to putting that together and
 6
 7
    digging in and figuring out where to land.
              So thanks, and that's it for me.
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                                                 Thanks verv
9
    much.
10
              Pass it back to you, Hearing Officer Webster-
11
    Hawkins.
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              HEARING OFFICER WEBSTER-HAWKINS:
                                                 Thank you,
13
    Commissioners, for your leadership and those wonderful
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    remarks.
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              I think I also want to thank the communities of
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    Mojave and Rosamond all along since our first informational
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    hearing. And both the members of local organizations,
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    local government, economic development representatives.
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    It's helped the process to have the community engaged.
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              Thank you, Lynn, from the Mojave Air and Space
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    Port. You've been a wonderful host for us. Very
22
    accommodating.
23
              And with that --
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              COMMISSIONER MCALLISTER: Can I make one more
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    comment?
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HEARING OFFICER WEBSTER-HAWKINS: Yes. You may, sir.

COMMISSIONER MCALLISTER: I neglected to mention that, but I just I think it was very meaningful that we started off with a moment of silence for all of our fallen colleagues. And this was a great place to do that. Just all the Marine Corps and Air Force and all the armed services. So really appreciate that context. It means a lot.

And California, you know, we're a blue state, but we have such an alliance with the military. I think it's often lost on people who may be listening in from beyond our borders. So you know, it's such a footprint and a collaboration with -- you know, I mean, even the Space Force, right here next door. So I think I appreciate all that context and thanks for bringing it up.

HEARING OFFICER WEBSTER-HAWKINS: Thank you.

And with that, the evidentiary hearing for Willow Rock AFC Docket 21 AFC-02 is now adjourned. The time is 5:52 p.m. Thank you.

(Off the record at 5:52 p.m.)

CERTIFICATE OF REPORTER

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

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

IN WITNESS WHEREOF, I have hereunto set my hand this 27th day of August, 2025.

ELISE HICKS, IAPRT CERT**2176

CERTIFICATE OF TRANSCRIBER

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

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

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

MARTHA L. NELSON, CERT**367

August 27, 2025