BEFORE THE ARIZONA POWER PLANT AND TRANSMISSION LINE SITING COMMITTEE

LS-251

IN THE MATTER OF THE APPLICATION OF WEST CAMP WIND FARM, LLC, IN CONFORMANCE WITH THE REQUIREMENTS OF ARIZONA REVISED STATUTES, SECTIONS 40-360, et. seq., FOR CERTIFICATES OF ENVIRONMENTAL COMPATIBILITY AUTHORIZING THE WEST CAMP WIND GEN-TIE PROJECT, A 345 KV or 500 KV TRANSMISSION LINE AND ASSOCIATED INTERCONNECTION FACILITIES WITHIN NAVAJO COUNTY, ARIZONA.	Docket No. L-21204A-22-0228-00206 LS CASE NO. 206 EVIDENTIARY HEARING

At: Flagstaff, Arizona

Date: October 11, 2022

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REPORTER'S TRANSCRIPT OF PROCEEDINGS

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(Pages 1 through 123)

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BE IT REMEMBERED that the above-entitled and numbered matter came on regularly to be heard before the Arizona Power Plant and Transmission Line Siting Committee at High Country Conference Center, 201 West Butler Avenue, Flagstaff, Arizona, commencing at 1:00 p.m. on the 11th day of October, 2022.

BEFORE: PAUL A. KATZ, Chairman

DANIEL SCHWIEBERT, Arizona Corporation Commission (via videoconference)
LEONARD DRAGO, Department of Environmental Quality
DAVID FRENCH, Arizona Department of Water Resources
JAMES PALMER, Agriculture Interests
RICK GRINNELL, Counties (via videoconference)
KARL GENTLES, General Public (via videoconference)
JACK HAENICHEN, General Public

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PINNACLE WEST CAPITAL CORPORATION
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(via videoconference)

CHMN. KATZ: Good afternoon, everyone. I am Paul Katz. Most of you know me already. I'm the chair of the Line Siting Committee, and I will just first start out by indicating we should be on the record, if we didn't already go on. Robin is our court reporter, and we'll try to do our best not to talk over one another.

This is the time set for a CEC hearing in CEC-206, West Camp Wind Gen-Tie Project, and I will ask counsel who is present for the applicant to identify himself for the record, if we could.

MR. ACKEN: Good afternoon, Mr. Chairman, Committee. Bert Acken of Acken Law on behalf of the applicant, West Camp Wind Farm, LLC.

CHMN. KATZ: And since I have him here already, we haven't yet determined whether or not we will allow APS to intervene, I don't see any reason why we shouldn't, but I would ask the attorney who is present here on behalf of Arizona Public Service, if you would, to kindly identify himself for the record.

MR. DERSTINE: Good afternoon, Chairman, members of the Committee. Matt Derstine, Snell & Wilmer, appearing on behalf of Arizona Public Service Company. Appearing on behalf of APS also is Linda Benally. Ms. Benally is appearing virtually, and I think we see her on the screen here in the hearing room.

CHMN. KATZ: And, welcome. And I believe virtual -- I'll take roll starting to my immediate left. I'll have the gentleman to my left identify himself for the record.

MEMBER DRAGO: Yeah, Len Drago, designee for Arizona Department of Environmental Quality.

CHMN. KATZ: And I've already indicated I'm Paul Katz; I'm the chair of the Committee.

And next, Mr. French.

MEMBER FRENCH: My name is David French; I'm the designee for the Department of Water Resources.

MEMBER HAENICHEN: I'm Jack Haenichen, representing the public.

MEMBER PALMER: Jim Palmer, representing agriculture.

CHMN. KATZ: And I believe we have possibly two members appearing virtually. I see Mr. Grinnell, but I'll ask you to identify yourself, Mr. Grinnell, if you can, and indicate on whose behalf you're appearing.

MEMBER GRINNELL: Good afternoon. Rick Grinnell, representing the counties. And I see my friends from Phoenix who are escaping the heat and up in beautiful Flagstaff, so good on y'all.

CHMN. KATZ: And is Daniel Schwiebert present as well virtually?

(No response.)

CHMN. KATZ: Off the record for just a minute.

(Discussion off the record.)

CHMN. KATZ: Well, we have enough without Mr. Schwiebert being present. I believe he may be attending the public meeting of the Arizona Corporation Commission, which is scheduled for today. And we'll leave it at that. But we have only one, two, three, four, five, six of us here right now, which I believe is a quorum. We can't afford to lose anybody.

With that all being said, we have those who are present already identified for the record. If I didn't indicate, we should have gone back on, I think Robin's a step ahead of me, so I appreciate that.

And I don't know if there's any members of the public here right now, but I just have to admonish or warn you to please not discuss this case with any of the members of the Committee. If you are wishing to make public comment at 5:30 this evening, there will be a session that you can -- if you're physically present you can sign in on a form and indicate whether you wish to speak or just provide us with written comments. And there was also a link for virtual participation by members of the public.

Let me just ask you, Mr. Acken, before we get

started with swearing in or affirming witnesses, are -- what's your position with respect to intervention by APS in this matter?

MR. ACKEN: The applicant does not oppose APS's intervention, and I think it's safe to say we would support it. The testimony in this case is that AES will be seeking two CECs, as APS will own a portion of the interconnection facility, so it makes sense for them to be here representing their interests.

CHMN. KATZ: Thanks very much. Excuse me for leaning over. I just had surgery a week ago yesterday and I have to take my time in getting whatever I might need.

And what is the -- let me ask you, Mr. Derstine, do you intend to call any witnesses at this point in time, or are you just going to be cross-examining those who are called by the applicant?

MR. DERSTINE: Mr. Chairman, APS doesn't intend to call any witnesses at this time. We do have a witness available, in the event that issues may arise that would require testimony from APS. And I also don't currently have any intent or plans to cross-examine any witnesses. So we're here to observe, and to the extent that there's an issue that arises that we think it's appropriate for APS to either examine one of applicant's witnesses or to

present a witness of our own, we'll -- we'll ask your permission to do that at the appropriate time, but we currently don't have any intention of doing so.

MEMBER GRINNELL: Mr. Chairman?

CHMN. KATZ: Yes, Mr. Grinnell.

MEMBER GRINNELL: Does counsel for APS -- my brain is just not working today -- when are the applications for CECs anticipated to be in front of this Committee?

CHMN. KATZ: Who are you asking about?

MEMBER GRINNELL: APS. It was mentioned they have two CECs.

CHMN. KATZ: No, no, two CECs will be issued to West Camp Wind, but ultimately they may be assigned to APS. We're not doing that in today's proceeding, correct me, Counsel, if I'm wrong.

MR. ACKEN: No, that's correct. And I'm sorry if that was unclear. The applicant is requesting two CECs, with the intention of assigning one of those to APS to cover the facilities that APS will own and operate associated with the gen-tie project. And we have done this -- this is a similar process -- I have done this with APS in Hashknife, more recently Serrano we did this model. And I did another case, it wasn't with APS, but Atlas where the applicant sought two CECs, again, to

assign a portion of the project to a future assignee. And so that's what we're doing here.

But West Camp Wind Farm, LLC, is the applicant; it's requesting both CECs. Both CECs, if granted, will be issued in the name of West Camp Wind, LLC, again, with the intent to assign the CEC covering APS-owned facilities to APS in the future.

CHMN. KATZ: You're muted. Mr. Grinnell, we can't hear you; you're muted.

MEMBER GRINNELL: No, I lost connection here, but -- and I apologize, but what I was asking is we are requesting CEC-206-A and CEC-206-B as part of this process?

MR. ACKEN: Yeah, that's correct. We've labeled them for the Committee's consideration as CEC-1 and CEC-2, both under case 206 and this docket number.

MEMBER GRINNELL: Okay. I didn't note that. Well, thank you.

CHMN. KATZ: Thank you.

What I'd like to do at this time is entertain from any members of the Committee a motion to allow Arizona Public Service to intervene in these proceedings.

MEMBER HAENICHEN: I move that we allow them to intervene.

MEMBER PALMER: I second it.

CHMN. KATZ: All right. Any discussion?

(No response.)

CHMN. KATZ: All in favor?

(A chorus of "ayes.")

CHMN. KATZ: Anyone opposed?

(No response.)

CHMN. KATZ: And, welcome, Mr. Schwiebert. You didn't miss much of anything, other than the fact that APS has made a request to intervene. They don't currently anticipate presenting any testimony. They're free, though, to examine -- cross-examine witnesses if there might be a need.

The next issue, though, that we need to resolve before we begin the hearing is I'll ask Mr. Acken his recommendations on whether or not we take a tour. And having spoken with him at the prehearing conference, it's my understanding that the objections from the community were to the wind farm, and not to the power lines. I don't know if we have any objections to the power lines that have been presented to us in writing by any members of the public, corporate or individual; is that correct, Mr. Acken?

MR. ACKEN: Mr. Chairman, it is correct, there have been no public comments opposing the gen-tie project. Mr. Gardner can speak to the one comment that

was received, but it wasn't in the nature of an opposition; it was a question about potential sale of their property for the gen-tie, but -- but the long and short of it is there has been no public opposition that we have received regarding the gen-tie.

I reached out to the counsel who represented the individuals at the Navajo County special use permitting process that you'll hear about, to see if they were going to participate and I did not hear back. So at this time my expectation is that they are not, and I don't see any of them in the room.

CHMN. KATZ: Do you think that there's any benefit that we might receive by taking a tour? And if we did that there would be only one, two, three, four, five of us going on the tour, and I don't know how well I'll be able to hobble along post-surgery, but I can make it, if necessary.

MR. ACKEN: So we looked long and hard at how to make a tour work for this project. Those of you that were on the Committee for Chevelon, which is another AES project that is under construction about 15 miles closer to Flagstaff than this project we were able to do a tour. There is a couple, maybe one real key distinction. For Chevelon you had a state highway that bisected the wind farm site, and also some of the CEC components, so there

was easy access to facilities for which the applicant was seeking a CEC.

Up on the screen, on the right-hand screen, you see slide 27. This is an overview map, it shows Joseph City at the top -- thank you; Mr. Gardner's going to be my pointer -- and so Joseph City is on Interstate 40. Again, that's about an hour and a half from here, so we would have to go to Joseph City. There are some surface streets, public streets that go -- that would cross the one gen-tie corridor, where there are existing transmission lines as well, where he's highlighting right there. So one of our tour spots could be in that location.

We can't get close to the Cholla Substation. You know, access to Cholla is not feasible, given security constraints for APS. And then there are some land constrictions, you know, as far as land access restrictions on the south side, so we can't even get close to Cholla.

There's one other tour spot that we considered along the potential gen-tie route that you see right there that is close to Cholla, but many miles from the wind farm project site, where the number of the project facilities will be constructed, the wind farm project boundary is outlined in black. Our infrastructure siting

area is in yellow. That's where all of the CEC components that are within the wind farm project would be located, and there's just no access. There's no public access to those facilities.

State Route 377 to the east, you can't see it due to topography -- and keep in mind each one of those boxes is a section that's a square mile, so we're talking about great distances. The opposition to the wind farm itself that arose at the Navajo County Special Use Permit proceeding -- which I should, I want to note and we will present testimony, Navajo County's Board of Supervisors approved this project unanimously by a 4 to 0 vote -- but the opposition came from landowners from the west and to the southwest of the wind farm project. And, again, their concerns related to the turbines. There is no public access to that area where we could take an executive van for the Committee. Those roads are not -- some of them aren't public access, and the ones that are are not built or maintained for a vehicle that we would need to take out there.

CHMN. KATZ: Would you point out a route, though, that -- that one gen-tie line will be taking and whether or not there's an existing gen-tie line that will parallel it?

MR. ACKEN: Yes. So we're requesting two

interconnections, a 345 interconnection that will be entirely within that yellow siting -- infrastructure siting area, and interconnect in that black hash box in the northwest corner directly adjacent to existing 345-kV lines. There's two or -- there's two 345- and one 500-kV line that run southwest from Cholla, and it bisects the northwest corner of the project site. So the 345 interconnection option entirely within that yellow box interconnecting with a new switchyard at the 345-kV -- existing 345-kV lines.

The 500 interconnection option is a little different. It would include a gen-tie running from the wind farm project site -- thank you for highlighting the screen, the laser pointer -- following the existing transmission lines from the wind farm project site to the existing Cholla Substation. Those would be -- that 500 interconnection would be co-located and parallel to two existing high-voltage transmission lines and in close proximity to a third.

CHMN. KATZ: Okay. And those dashed lines that run from the top down to the left-hand corner and from the top down to the right-hand corner, those are already existing lines, correct?

MR. ACKEN: Correct. On the legend you can see, depending on the size, those are existing 500- and 345-kV

transmission lines that start at the Cholla Substation, you know, once served, and some still serve in some capacity, providing -- transmitting power from Cholla to the Valley and places south.

CHMN. KATZ: And most of the to-be-constructed lines are on private property; is that correct?

MR. ACKEN: They are entirely on private property. So the gen-tie facilities, the switchyard that we're requesting for the 345-kV interconnection, and up to three project collector substations, also in the infrastructure siting area, all are located on private lands. There are no state or federal lands implicated by this project. The applicant has secured agreements for the private lands for all infrastructure components, with the one landowner who -- one private landowner in this area up until it reaches the APS-owned facilities at Cholla.

CHMN. KATZ: And are -- have you prepared a virtual tour, in the event we don't do it in person?

MR. ACKEN: We have. In my view, it's an excellent virtual tour, it's certainly consistent or better than the ones this Committee is used to seeing, and we actually have two. We have one for the 345-kV option and one for the 500-kV option, and we have a couple of simulations of the project facilities as well.

CHMN. KATZ: Okay. Before I have us dig any deeper, we can either take a tour or not. We're talking about a three-hour round trip just to get there and back. And the tour itself isn't going to give us much of a view of anything. And there are already existing power lines, except within that square, toward the lower area, that's outlined in black on this particular exhibit, which looks like it's Exhibit 20 -- is it 27?

MR. ACKEN: Slide 27, to West Camp Wind Hearing Exhibit 3.

CHMN. KATZ: I can entertain a motion. I don't know how mobile I am or how worthwhile the tour would be, but I'm not going to preempt anybody. So we can either have a motion to not take a tour or a motion to take a tour and vote on it.

MEMBER PALMER: Mr. Chairman, if I may?

CHMN. KATZ: Yes, sir.

MEMBER PALMER: I am normally a strong proponent of seeing the areas that we impact and like doing that. That being said, because of that I read with interest the record of the prehearing conference and the explanation that was given there and the explanation that Mr. Acken gave us here this afternoon, and I am convinced there's probably a limited value in this particular tour and am willing to forgo that for a virtual tour and would make

that in the form of a motion.

CHMN. KATZ: Thank you. We do have a motion. Is there a second? And, again, this is that we would not take an in-person tour.

MEMBER HAENICHEN: I'll second and I support it.

CHMN. KATZ: Any discussion?

MEMBER GRINNELL: Mr. Chairman, quick question. I was looking at an Arizona map. Joseph City, is that between Holbrook and Winslow?

MR. ACKEN: It is.

MEMBER HAENICHEN: Closer to Holbrook.

MR. ACKEN: Closer to Holbrook.

MEMBER GRINNELL: Okay. I just wanted to clarify where I was looking at.

CHMN. KATZ: Any further discussion?

(No response.)

CHMN. KATZ: All in favor of waiving the tour, please say, "aye."

(A chorus of "ayes.")

CHMN. KATZ: Anyone opposed?

(No response.)

CHMN. KATZ: We're not going to take a tour. And the last question I have of you, before we get going, is whether or not notice has been given to any local governmental entities that might be required to be

notified pursuant to the statute?

MR. ACKEN: Yes, Mr. Chairman, the only affected jurisdiction to which notice is required is Navajo County. Again, all project facilities are located on private lands, in unincorporated Navajo County. Notice has been provided to Navajo County of this proceeding, and as I mentioned earlier, Navajo County has already approved the Special Use Permit for the -- for the wind project itself.

CHMN. KATZ: Just give me a second.

And there aren't any federal funds involved or any federal lands involved, correct, so we don't have any NEPA concerns?

MR. ACKEN: That's correct.

CHMN. KATZ: Okay. What you can do is I don't know if you want to introduce your panelists first or make an opening statement before calling them, either way is fine with me.

MR. ACKEN: Thank you, Mr. Chairman. I was just going to make a few brief statements, and I actually covered a lot of them in the discussion about the tour, so I'll try not to be redundant.

West Camp Wind Farm and AES really appreciate the opportunity to be back before the Committee to present the West Camp Wind gen-tie Project. As you see

on slide 27, this shows -- this map is important, and we have a lot of maps, and I want to explain what you're seeing.

The project -- there's a few interesting things that we're doing here. We're requesting approval for two interconnections, both a 345- and a 500-kV interconnection. We are requesting two CECs, as I mentioned earlier. And then within the infrastructure siting area shown in yellow are requesting the authorization to use any of those sections in yellow on private land for the gen-tie facilities to interconnect the project's collector substations -- and, Mr. Gardner, if you could highlight that -- there are three project collector substation sections that we are requesting approval for. The applicant will actually construct either one or two collector substations, depending on phasing. And depending on phasing, whether it's done in one or two, it will affect which of those three locations that the applicant would use.

So we're requesting flexibility for the substations. And we're requesting flexibility within that infrastructure siting area to -- for the 345 option -- to the 345-kV switchyard siting area. And what's being highlighted there in the northwest corner of the infrastructure siting area is the 345-kV section for

which we're requesting approval in the black hash line. That section is where the new 345-kV switchyard would be constructed, ultimately owned by APS, to interconnect the wind farm gen-tie to the regional grid on those APS -- on that APS 345-kV line.

For the 500-kV option, again, you will have 500-kV infrastructure transmission lines within the boundary of the infrastructure siting area, and will ultimately head north, where it will leave the wind project and infrastructure siting area in the middle of the northern boundary of the wind farm, where you see the -- see the highlight in the laser, right there, from that point the 500-kV corridor heads north, crosses the three existing lines, and then from that point it parallels existing transmission lines to the Cholla Substation.

CHMN. KATZ: Okay.

MR. ACKEN: I mentioned earlier all project facilities are on private lands, and the applicant has land agreements in place, and we will provide testimony about that.

MEMBER GRINNELL: Mr. Chairman?

CHMN. KATZ: Yes, Member Grinnell.

MEMBER GRINNELL: Mr. Acken, so you're asking for approval to build one, two, three new substations,

the development of a switching station, and then two gen-ties; is that correct?

MR. ACKEN: Almost. The only -- the only distinction is we only are requesting approval to build two collector substations. There will be no more than two, but we're asking the authority to put them in one of those three sections that are shown in the infrastructure siting area.

So, for example, if the wind project is built in one phase, the collector substation will be that middle one that Mr. Gardner is highlighting right there. If the wind project is built in two phases, we would use the other two substation sections to build the two collector substations for the separate phases. So there will never be three collector substations -- well, that's not the request, the request is up to two, but place with it in one of those three sections.

MEMBER GRINNELL: All right. But to that end, which one? And what -- out of all this, what are you actually going to be assigning or requesting to assign to APS? Which one of these interconnections or gen-ties are we actually speaking to?

MR. ACKEN: Sure. So first let's talk about the 345, so we are going to assign interconnection facilities to APS where the -- where the West Camp interconnection

facilities and transmission lines meet existing APS infrastructure. So for the 345, APS will actually own and operate the 345-kV switchyard that we're requesting approval for. So we would assign the authority to build the 345-kV switchyard to APS. You'll hear reference to what's called the point of change of ownership, or POCO, that will be the first transmission structure outside the switchyard. And Mr. Gardner will present -- this is in the virtual tour -- I think if you're a visual thinker like me, it really helps to see that visually where that change will take place.

So the for the 345, APS will have the authority -- well, CEC-2 will have the authority to construct the switchyard; that authority will be assigned to APS.

MEMBER GRINNELL: And then the line coming from the Cholla Substation down to the exterior here, the four -- the black line where the wind farms are, who is going to -- is that in place already or is that something that you're going to build, in addition to the 345?

MR. ACKEN: It will be built. And I'm going to ask, if Mr. Gardner knows, he can flip ahead to the slide showing the Cholla interconnection.

MEMBER GRINNELL: I've got maps here, but I'm just not sure which one I'm looking at.

MR. ACKEN: I'll go ahead here. I'm going to go to slide 37 -- no, that's not the one I want. 45.

Okay. So 45 shows -- so slide 45 shows -- then this will be the map that would be attached to CEC-2, one of the maps that would be attached to CEC-2, so none of the -- none of the facilities have been constructed yet. We're seeking approval for that. West Camp will hold and construct the facilities within CEC-1, which includes that 500-kV transmission line that is parallel to the existing APS transmission lines.

It is only at, once we get to what we'll call the APS control area, and Mr. Gardner is highlighting that, it's a rectangle -- it's a dashed rectangle within that control area will be -- is the facilities that are covered by CEC-2. And so, again, the thought is once this project is ready to go to construction, CEC-2 will be assigned to APS, who will actually construct and own and operate the facilities within that area, because it's already within the area that they control at the Cholla Substation.

And, again, Mr. Gardner in the virtual tour, has great maps to kind of highlight the colors and draw it out perhaps better than what the Figure 45 shows.

MEMBER GRINNELL: Thank you.

MEMBER PALMER: Mr. Chairman?

CHMN. KATZ: Yes.

MEMBER PALMER: And I probably should hold these questions for the witnesses, but I just want to be sure going forward that I'm clear. So when you talk about the 345 option and the 500 option, it's not one or the other; the intent is to build both options, and that's CECs 1 and 2?

MR. ACKEN: No, I welcome the questions, because this is -- what we're asking for is a little different, and I want to make sure it's clear. And that's why I'm doing it in the opening and why Mr. Gardner will really take some time to walk through. We are requesting the optionality to build either the 345 or 500.

MEMBER PALMER: Okay.

MR. ACKEN: We will not build both. But we want -- we are requesting the Committee grant us the authority to build either, depending on information that's developed down the road about which interconnection makes the most sense for potential customers, costs, things of that nature. Information that we don't have today. And, again, our witnesses will address that. But so that's why we're asking for both the approval for the 345 and the 500.

The two CECs is a different ask, and it gets confusing, because CEC-1 is for all of the facilities

that West Camp AES will ultimately own. And CEC-2 is for the interconnection facilities that APS will own. So CEC-1 includes 345- and 500-kV options. CEC-2 also includes 345- and 500-kV interconnection options. One thing you will see when we get to this point in our form of order for the draft CEC is we -- we borrowed a condition or we used a condition from a recent case where another applicant had requested optionality for alternatives, and this relates to the 345 and 500. So a condition that says at the point you make -- the applicant makes an election of which one they're going to use, they'll file something in the docket and then the other one goes away. So there will only ultimately be one interconnection, either 345 or 500.

MEMBER PALMER: Thank you.

CHMN. KATZ: Let me just ask, though, if APS is going to get assigned one of those lines, are they going to be the sole owner and operator of that line or is it going to be jointly owned between West Camp and APS or is that up in the air?

MR. ACKEN: Well, the project will be jointly owned. And when you think of the project, I think of the transmission line. But each entity will own separate facilities. So APS will own the interconnection facilities associated with either the 345 or 500. There

won't be joint ownership of those specific facilities.

CHMN. KATZ: And that will come out of one substation, as opposed to the other line option would come out of another?

MR. ACKEN: Yeah, but under either. So under the 500-kV option, APS will have -- ultimately hold the CEC for the interconnection facilities within that control area at Cholla for the 500 facilities. They will also have a CEC for the -- ultimately obtain, be assigned, CEC-2 from -- from West Camp Wind, that will include the 345-kV switchyard, as APS will own and operate that.

MEMBER HAENICHEN: Mr. Chairman?

CHMN. KATZ: Yes, Mr. Haenichen.

MEMBER HAENICHEN: I'm not comfortable with this conversation that we've just had. The Committee, or at least me as part of the Committee, wants to know why there are two options in voltage. What are the reasons for it? And because maybe we won't agree that that's a good argument.

MR. ACKEN: And we will certainly present testimony as to why we're requesting that, Member Haenichen. What I want to do in the opening is tee up for you the ask, so that it's clear what we're asking. But yes, we understand your perspective, and we are

prepared to address that in our testimony, and we will. Our witnesses will address that.

MEMBER HAENICHEN: Thank you.

CHMN. KATZ: And the first question before Mr. Haenichen was by Member Palmer. I was just saying your question, I didn't identify you. And I want to make sure I do that, because Robin isn't overwhelmingly familiar with us or more familiar than she might like to be.

MEMBER PALMER: I'm the good-looking one on the end, Robin.

CHMN. KATZ: That all being said, do you want to introduce your witnesses or I can affirm or swear them in? Are they going to be called as a panel or are you going to be doing one witness at a time or you're not sure?

MR. ACKEN: I better be sure. We will be calling the four witnesses that you see in front of you as one panel.

CHMN. KATZ: And, again, they are Allen Graber, Alexandra Shin, Robert Gardner, and Terrance -- is it "Unrein."

MR. UNREIN: Unrein.

CHMN. KATZ: Unrein.

And I'll take a vote now. This is the only time

you ladies and gentlemen get to vote. Do you prefer an oath or an affirmation? And if there's a division, we can do both, some for one of you and some for the others, but would you prefer an oath or an affirmation?

MR. GARDNER: Affirmation is fine.

CHMN. KATZ: Affirmation?

MR. GARDNER: Yes, sir.

CHMN. KATZ: I'm not going to require you to stand, but if you all four of you raise your right hands, I have a question to ask you.

(Terrance Unrein, Robert Gardner, Alexandra Shin, and Allen Graber, were duly affirmed en masse, by the Chairman.)

CHMN. KATZ: There's a unanimous -- everybody has been affirmed, and you can proceed with your questioning.

MR. ACKEN: Thank you, Mr. Chairman.

TERRANCE UNREIN, ROBERT GARDNER,
ALEXANDRA SHIN, ALLEN GRABER,

called as witnesses as a panel on behalf of Applicant, having been previously affirmed or sworn by the Chairman to speak the truth and nothing but the truth, were examined and testified as follows:

//

D I R E C T E X A M I N A T I O N

BY MR. ACKEN:

Q. Mr. Unrein -- let's give the AV team a second here. I need to go back and get these slides synched. Thank you.

Mr. Unrein, state your name and business address for the record.

A. (MR. UNREIN) My name is Terrance Unrein, and my business address is 282 Century Place, Suite 2000, Louisville, Colorado 80027.

Q. By whom are you employed and in what capacity?

A. (MR. UNREIN) I'm the director of the Western Wind Energy Development for AES Clean Energy Services, LLC.

Q. And please summarize your educational background and work experience.

A. (MR. UNREIN) I graduated from Colorado State University with a degree in construction management. I have been in renewable energy for about 10 years, since 2012. I have been both a consultant and developer within the renewable energy industry, and I have worked for AES-affiliated companies for approximately three years.

Q. And have you testified before this Committee previously?

A. (MR. UNREIN) Yes, I've testified before this

committee in fall of 2019, I believe it was October -- October 17, 2019, going off of memory, for the Chevelon-Butte Wind Gen-Tie Project that was located in Coconino and Navajo counties, Arizona.

Q. And what is your role in the West Camp project?

A. (MR. UNREIN) I am responsible for overall development and commercialization of this project.

Q. And what topics will you cover in your testimony today?

A. (MR. UNREIN) I'll be providing an overview of the applicant and who we are. I will be providing some technical details, and hopefully some clarity as to our unique request with two different interconnection voltages. And I'll be summarizing our presentation and be available, with my colleagues at the panel here, to answer any questions, comments, and concerns from the Committee.

Q. Thank you.

Next, Mr. Gardner, please state your name and business address.

A. (MR. GARDNER) My name is Robert Gardner, 282 Century Place, Suite 2000, Louisville, Colorado.

Q. And by whom are you employed and in what capacity?

A. (MR. GARDNER) I'm employed by AES Clean Energy

Services, LLC, and I am the project manager for the wind development team.

Q. Summarize your educational background and work experience.

A. (MR. GARDNER) I hold a degree in mathematical economics from Colorado College. I've been working in renewable energy for approximately three years, all with AES-affiliated companies.

Q. And what is your role with this project?

A. (MR. GARDNER) I'm the project manager for the West Camp Wind Farm and gen-tie project, and I run day-to-day activities for the projects.

Q. And what will you cover in your testimony today?

A. (MR. GARDNER) I'll be going through much of our application, talking about an overview of the project, the permitting overview for the project, some of the needs and benefits that this project brings, and technical aspects of our application. Additionally, I'll be here for any questions that the Committee has.

Q. BY MR. ACKEN: Ms. Shin, please state your name and address for the record?

A. (MS. SHIN) Alexandra Shin, 16745 South Plaza Way, Flagstaff, Arizona.

Q. By whom are you employed and in what capacity?

A. (MS. SHIN) SWCA Environmental Consultants, and

I'm a lead project manager.

Q. Please provide the Committee with some information regarding your educational and professional background.

A. (MS. SHIN) I have a master's in applied science in environmental policy and management from the University of Denver. And a bachelor's of science in political science from Northern Arizona University. I've worked as an environmental planner and project manager for over 10 years for both state government and private consulting.

I've been employed by SWCA for over six of those years. SWCA is a nationwide environmental consulting firm, and we prepared the CEC application and exhibits under the applicant's supervision and review.

Q. And what topics are you covering?

A. (MS. SHIN) I will provide testimony on the CEC application and exhibits and environmental compatibility for the topics of land use, cultural resources, visual resources, and sound and interference. Mr. Graber will provide testimony regarding biological resources.

Q. Thank you.

So, Mr. Graber, state your name and address for the record.

A. (MR. GRABER) My name is Allen Graber, 1645

South Plaza Way, Flagstaff, Arizona.

Q. And describe your professional and educational background.

A. (MR. GRABER) So I hold a degree from St. Lawrence University in biology. I have 25 years of experience as a wildlife ecologist, working for different private and public entities, 15 of those years have been working with SWCA as a project manager and wildlife ecologist. I primarily focus on renewable energy projects.

For this -- for this project, I'm the lead ecologist, and, as Alex mentioned, will be providing testimony on biological resources.

Q. Thanks.

So we're going to start off with a description of the applicant, West Camp Wind Farm and its parent AES.

Mr. Unrein, can you describe the applicant for the Committee?

A. (MR. UNREIN) Yes. So West Camp Wind Farm, LLC, is an indirectly owned subsidiary of the AES Corporation. The AES Corporation is a United States-based publicly traded energy company. Within the AES Corporation, the publicly traded company, there's AES Clean Energy. And that's who is here before you today. We are the United States-based renewable energy business unit of the AES

Corporation. We develop, own, and operate solar, wind, and energy storage projects across the country.

And, again, something nominally unique to our project compared to other applicants is that we are an owner and operator of our assets. We're not a developer that builds projects and sells them off. And on this map in particular, that shows all of the green states and stars on green states, those are, again, wind farms that we own and operate.

So we operate wind farms from coast to coast, California to New York, in various states in between, and then the two blue states being Mississippi and Arizona, those are two wind farms being built as we speak. And again, we -- I think our counsel, Mr. Acken, has mentioned that we're currently building the Chevelon-Butte Wind Farm in Coconino and Navajo counties, Arizona.

CHMN. KATZ: And, again, just for the record, so there's no confusion, you said AES and not APS, correct?

MR. UNREIN: Yes.

CHMN. KATZ: I just want to make sure our reporter caught that, and I won't ask that again.

Go ahead, Mr. Acken.

MR. ACKEN: It will make for a fun record.

Q. BY MR. ACKEN: Following up on your response

regarding Chevelon-Butte, I'd like you to talk about AES's presence in Arizona as a whole, not just Chevelon, but are there other projects that you have and your -- your community partnerships?

A. (MR. UNREIN) Yes. We're pleased to be back before this Committee today because Arizona, in particular, is a very critical and very key market to AES. The map on the right side of the screen shows the state of Arizona, and some of our operating projects. So we own and operate hundreds of megawatts of solar down in Pinal County. We own and operate energy storage facilities in the Phoenix metropolitan area. And, as previously mentioned, we're building the Chevelon-Butte Wind Farm that was before this Committee in 2019.

And, in addition to those projects being built and currently operating, we have gigawatts of future solar, wind, and energy storage projects planned on private, public, and tribal lands in the state of Arizona, some of which are shown on the screen.

And, I believe, yeah, this next set of slides here, just -- just continuing on how Arizona's a -- again, a very core market for AES, we take community partnerships very seriously, and we engaging -- we engage in these partnerships early in the development process. So that when we -- when we move to build and operate a

wind farm and be present locally for decades, we're not a new face, unknown entity.

But some of our -- some of our partnerships -- partnerships, specifically up north, again, there's many partnerships other parts of the state, but up north the Northland Pioneer College in Navajo County, the Willow Bend Environmental Education Center here in Flagstaff, different tribal initiatives and initiatives with memberships with chambers of commerce.

And, again, this is just illustrative of Northern Arizona. And because we're a long-term owner-operator, and we're not new to Arizona, we're proud of these partnerships that we've established.

Q. Mr. Gardner, describe the non-jurisdictional wind farm associated with the gen-tie project before the Committee.

A. (MR. GARDNER) So the overall wind farm here is a maximum 500 megawatt generation capacity wind farm, entirely Navajo County. It's approximately 10 miles south of Joseph City, on about 52,500 acres total of property; 45,000 of which is owned by Aztec Land and Cattle Company, a private entity. The project -- the wind farm project will consist of up to 104 wind turbines, 34.5-kV underground collection lines, battery storage facilities, and access roads.

As Mr. Acken mentioned, this project did receive unanimous approval for a Special Use Permit from the Navajo County Board of Supervisors last month. As far as schedule goes, we're looking at and working actively towards a 2025 commercial operations date. That would facilitate construction in late 2023 and 2024. I do want to mention while, you know, 52,000 acres is a very large piece of property, the nature of wind energy is that the actual permanent disturbance is much smaller than that, less than 3 percent.

So, you know, it's a large area, but a very small area will be permanently disturbed by the wind farm, and the existing land uses on this property will remain. So ranching, recreation, et cetera, will still be there after the wind farm is built.

Q. BY MR. ACKEN: Next, let's discuss the project that's before the Committee, just start off by describing the area in which the gen-tie project will be sited?

A. (MR. GARDNER) Yeah, so Mr. Acken did, you know, preface this a little bit, but I'll go into it in a little more detail. So the wind farm, full area, is in black here. The infrastructure siting area and the gen-tie line, the corridor substation, are what we're here today to discuss and seek approval for.

So the infrastructure siting area here is shown

in yellow, with the three substation sections and switchyard section. And then the gen-tie line corridor, the Cholla Substation is shown here in gray. Both of these, as mentioned, are entirely located in -- within private property.

Q. Next, describe the facilities for which you're requesting CECs.

A. (MR. GARDNER) So for the CECs, we're requesting authority to build one new switching station, up to two collector substations located in two of these three sections, up to approximately 11 miles of 345-kV gen-tie line, and up to approximately 25 miles of 500-kV gen-tie line, knowing that only one of these would ultimately be built.

Q. And we'll go into more details about the why in a little bit, but just to confirm, you are requesting approval for both the 345- and 500-kV options, correct?

A. (MR. GARDNER) Yes, that is correct. And we will go into more detail on that later on in testimony.

Q. And is that due to your two active queue filing positions with APS?

A. (MR. GARDNER) Yes, sir. We currently have a 345-kV queue filing and a 500-kV queue filing, which are active in APS's interconnection queue system.

Q. Before we talk about the queue position filings,

I want you to step back and describe the two interconnection options. So start with the 345-kV interconnection option and describe the facilities associated with it.

A. (MR. GARDNER) Yup. So our first queue filing is Q-311, which is the 345-kV, 500 megawatt wind, and 250 megawatt battery storage. As you'll see on the map on the right, this entire option is located within -- oh, sorry, wrong button -- located within the infrastructure siting area shown here in yellow entirely on private property.

So for this option, we would build up to two collector substations in these three substation sections. From there, the 345-kV gen-tie line would move through the infrastructure siting area up to the switchyard section here, where a switchyard would be built. And the point of interconnection for this queue filing is the 345-kV existing Cholla-Mazarzal transmission line owned by APS. So the 345-kV option interconnects here on-site via a line tap and switchyard.

And that's shown here a little bit more closely. So our gen-tie line would come in, a switching station would be built, and it would tie into the APS 345-kV line here.

Q. And the figure that is being shown on the right

now is labeled as 31 from the hearing slides, marked as WCW-3; is that correct?

A. (MR. GARDNER) That is correct.

Q. Okay.

MEMBER GRINNELL: Mr. Chairman?

CHMN. KATZ: Yes, Member Grinnell.

MEMBER GRINNELL: I don't want to convolute this any more than it already is to me. But where would the 500-kV line come into play?

MR. GARDNER: Thank you for the question. And I'll go over the 500-kV line in a second, so this is just the 345-kV line that we're discussing right now. And then we can go into the 500-kV line and where that would be in the slides to come right after this.

MEMBER GRINNELL: All right. Thank you.

MR. GARDNER: Yes, sir.

MEMBER HAENICHEN: Mr. Chairman?

CHMN. KATZ: Yes.

MEMBER HAENICHEN: In your negotiations on these options, are you planning to buy the land or just lease it?

MR. GARDNER: This land is all leased with the private property owner. And it is currently -- we have site control via leases and easements currently.

MEMBER PALMER: Mr. Chairman?

CHMN. KATZ: Yes, Mr. Palmer.

MEMBER PALMER: Correct me if I'm wrong, and maybe Mr. Acken has the institutional knowledge, but Aztec Land and Cattle is the same landowner that AES dealt with on the Chevelon-Butte; is that correct?

MR. ACKEN: It is not correct.

MEMBER PALMER: It's not?

MR. ACKEN: And I misspoke in the prefiling conference, and that may have been where you saw that. I think it was Ohaco family for Chevelon.

MR. UNREIN: Yeah, it's Chevelon-Butte Limited Liability Partnership is the primary private property owner for the Chevelon-Butte Wind Farm.

MR. ACKEN: I do think that this Committee has seen other projects with land that is owned by Aztec, such as Hashknife project.

MEMBER PALMER: That's the one I'm thinking of. Okay, thank you.

Q. BY MR. ACKEN: Mr. Gardner, I'd like you to address one of Member Grinnell's questions about the three substations. So why are you requesting approval for three substations when you're only ultimately going to build two?

A. (MR. GARDNER) So that's to accommodate for the potential of multiple phases being built out for the

project. So for a large wind farm like this, it's very common for the full project to be built in two phases. So half the project would be built in one point and half the project would be built in another. If that were the case and we were to build the turbines in the southern part of the project here, we would build the first collector substation down here in Section 9. And then for the second phase, the project would be built -- the turbines would be built in the northern section, and the second collector substation would be built in this substation section.

So that would be the dual substation possibility. If only one -- if the whole project is built in one phase, only the central collector substation would be built.

Q. And, next, I'm going to have you describe the 500-kV interconnection option to address Member Grinnell's question about that as well.

A. (MR. GARDNER) Yeah, so first, I'll start by saying that for both options, the substation layout is the same. So for the 500-kV option and 345-kV option, we have the same substation sections, and the same kind of phasing that I described would apply.

So here we have, you know, our infrastructure siting area and our three substation sections. For the

500-kV option, the same collector substations would be built and the 500-kV gen-tie line would extend north in our infrastructure siting area, all on private property, up to the gen-tie line corridor to Cholla Substation.

From there the 500-kV gen-tie line would go north, it would cross the existing three transmission lines, where it would head northeast paralleling the existing lines to the Cholla Substation.

MEMBER GRINNELL: Mr. Chairman?

CHMN. KATZ: Yes, Member Grinnell.

MEMBER GRINNELL: On the 345-kV line, are you piggybacking on the existing kV lines from the project area to the Cholla Substation or are you create -- establishing a whole new set of infrastructure power poles? It looks like with the 500-kV line, it's going to be an independent line of the 345-kV, if it goes that way. If you go with the 345-kV line, are you going to piggyback on the existing kV lines that run from the Cholla Substation or is all of this going to be new infrastructure regardless if it's 345 or 500?

MR. UNREIN: I'd be happy to provide some clarity there. So the 345-kV option, you can see that that existing 345-kV line that's coming down diagonally throughout our site, we would build a switchyard there and cut that line -- cut that line, double circuit into a

switchyard, so we would be putting our electrons in the switchyard which can flow in either direction AC -- it could flow up toward the Cholla Substation, which transmits electricity in many directions from that substation, or those electrons could travel to the southwest. So 345-kV, our wind farm is breaking and tapping into that line that runs through our site.

The 500 kV option, we would be building a new -- new gen-tie line that parallels existing lines going into the Cholla Substation. So our electricity on the 500-kV option, our electrons would be going right into that substation via new project transmission line being built.

MEMBER GRINNELL: So, in essence, these would be two parallel lines, one 345 and one 3500 -- or one line for 500. So you basically would have two lines capable of transmitting power one way or the other?

MR. UNREIN: I would note that we are seeking approval to build either/or option. We are not seeking approval to build both options concurrently physically in the field. We're requesting optionality, such that we can make an informed decision in the -- in the future of which one to build, and we will only build either/or.

CHMN. KATZ: My question is, are there going to be just two lines built, not four, because that was a

little confusing earlier?

MR. UNREIN: That's -- that's correct, yeah.

CHMN. KATZ: And one of them to be, in whole or in part, assigned to APS?

MR. GARDNER: So in either option, there's actually only going to be one transmission line built. So for the 500-kV option, one -- whoops, sorry, wrong button again -- one transmission line would be built, if it's two substations, connecting the two substations, and then going north to our gen-tie corridor, that line would then go north and parallel the existing transmission lines all the way to the APS-owned land outside the Cholla Substation.

For the 345-kV option, again, just one transmission line would be built, and we'll show this in our flyover, the virtual tour, but so it could go -- you know, if we built this collector substation and this one, the line would go down to this collector substation and then up to the switchyard, where it would interconnect to the line. So in either option, it's really just one --

CHMN. KATZ: One transmission line.

MR. GARDNER: -- transmission line being built, yes, sir.

MEMBER GRINNELL: Don't you already have the one 345-kV line coming out of the Cholla Substation down to

that area?

MR. GARDNER: Yes, sir, we do. And there are two 345-kV lines here. And that, for this 345 interconnection option, is why we would build our gen-tie line and interconnect it to those existing transmission lines.

MEMBER GRINNELL: But if you went with the 500 and then you'd be connecting and then building, there would already be a 345 line and you would be building a new 500-kV line, correct?

MR. GARDNER: That is correct, yes, sir.

MEMBER HAENICHEN: Chairman?

CHMN. KATZ: Yes, go ahead. And I'll be occasionally standing, as my doctor recommended, so don't think I'm walking out on you.

MEMBER HAENICHEN: Let me see if I got this straight. This hearing is going to be over in a few days, and we're going to have voted on whether or not to give you that option to build the two. But we're never going to know during this hearing which one you're going to select. So I'd want some more color on that about what factors you're considering to make these choices.

MR. GARDNER: Yes, sir. I'd be happy to go into that now. So, like we discussed, we have two active queue filings currently with APS, Q-311, which is the

345-kV option, and Q-351, which is the 500-kV option. Both of these queue filings are in the study process currently, which we'll go into in more detail later on, but each of those two interconnection options will have network upgrades associated with them that we don't know at the current moment. So down the road we will know more about how much each of these options will cost, and if -- if -- which option is more feasible for us as a company building it.

Additionally, the 345-kV and the 500-kV options provide deliverability to different customers. And so the 345-kV and the 500-kV transmission system provides -- you know, the electrons can flow to different areas to different customers, and so right now we do not know who that customer will be or where that customer will be. And so we can't make a decision on the 345- or 500-kV option without knowing our customer, which comes down the road in the project.

MEMBER HAENICHEN: So is APS going to be a party to this -- this procedure and have a vote, so to speak?

MR. UNREIN: Let me -- is the question will APS make the decision of whether we proceed with 345-kV or 500-kV?

MEMBER HAENICHEN: Yes.

MR. UNREIN: Okay, so --

MEMBER HAENICHEN: Or is it a collaborative thing between the two?

MR. UNREIN: We -- and I'm wondering, Bert, if we should just get into the interconnection study process now? That kind of explains this. But, yeah, it's bound by a FERC-regulated multi-year study process to ascertain which -- which position is more favorable for us.

MR. ACKEN: I do think -- I do think it would be helpful to take a step back and explain the APS interconnection study process. Because we have -- the testimony is we have two queue position filings, one for 345, one for 500.

Q. BY MR. ACKEN: Why do we have two? What's the status? How would ultimate decisions be made? Let's answer those questions, but start off with what is the APS interconnection study process?

MEMBER GRINNELL: Mr. Acken, if I may, before you get to that question, I'd like to step back to the other gentleman's comments about knowing who his customers are going to be, and where they're going to be. I would imagine you're developing a project of this magnitude, you would have a pretty good sense of who your customers are and what kind of power is going to be required to service those customers; would I be correct in that assessment?

MR. UNREIN: So let me -- let me clarify that. When Mr. Gardner said "customers" maybe a better term would be "end users" of this electricity. So we're a wholesale power -- we're a wholesale power provider, in that we're going to provide energy to one customer and the actual needs of -- the actual needs of where the electrons are needed could be different in the future. So the 345-kV interconnection, that flows to different areas on Arizona's transmission grid than the 500-kV option. And in today's dynamic energy market, there's different needs at these different interconnection voltages within Northern Arizona's grid.

So different interconnection voltages go to different places, and we don't know right now which -- which areas on the transmission grid and which interconnection voltage is needed and what's going to be most advantageous.

MEMBER GRINNELL: But you're not building this without your research being developed about who you're going to wholesale your power to, your electrons to, and who their potential customers are down the road. I mean, apparently this company is well-established, so they've done their homework. So I guess what I'm getting to is if you have a 500-power kV line, and then you don't need all that power, you could use step-down transformers; am

I correct? In lieu of trying to run -- because the more we talk about 345 and 500, dual ownership, splitting this, you know, the pie gets a little bit who is eating what piece. And I'm just -- I'm not trying to be a hard -- I'm just really trying to keep this as logical as I can, because to me there's almost, it's a duplication of request without -- if you don't know the outcome of where you plan on going, I would be wondering if there's enough research been done to establish this need in the first place.

MR. UNREIN: So if I could, one simple way that to maybe think of the ownership, I know that that's not the -- not the primary uncertainty that we need to dive in on here, but with respect to the -- to the ultimate ownership and the way the CECs are being split, maybe an easy way to think about it is CEC-1 is AES. So that first CEC we're going to choose one voltage or the other, and that is AES. CEC-2, that's APS. Again, either/or, but that's APS. So maybe with the ownership that -- that -- that's been in my mind lately CEC-1, AES; CEC-2, APS.

Again, with respect to choosing which interconnection voltage, because Northern Arizona is a critical market for AES, and because we've been developing renewable energy projects in this state for many years, we, years ago, filed -- strategically filed

different interconnections at the Cholla Substation, because those different voltages go to different places and have the ability to serve different customer needs.

So this is -- this is unusual that one wind farm has two different interconnection positions. That is, again, because this is not a new market for us and this isn't our first wind farm in the state, so we made those decisions years ago to be in a position to meet the deliverability needs of customers in Northern Arizona.

And maybe, Bert, should we talk -- talk about the study process?

MEMBER GRINNELL: Mr. Unrein -- did I say that right?

MR. UNREIN: Yup.

MEMBER GRINNELL: How much of this power is going to be sold to out-of-state wholesalers or retailers, if you will? Or how much -- you're going to sell it to APS, or maybe UniSource, or one of these other utilities, how much is going to be going outside of Arizona?

MR. UNREIN: So the commercial aspects of our project are due to the -- due to the stage of development. We do not have signed commercial and signed off-take agreements for this wind farm. And if we did, that is confidential information that we wouldn't be able

to disclose in a public forum. But we -- we cannot provide that information, nor do we have the information.

What we can say is that our point of interconnection -- both point of interconnections that the -- the CEC is seeking approval for, is -- has Arizona Public Service as the transmission owner, so both points of interconnection go to Arizona Public Service --

Q. BY MR. ACKEN: Can you speak --

MR. UNREIN: -- who is an Arizona utility company.

Q. BY MR. ACKEN: Can you speak to who is your customer for Chevelon-Butte?

A. (MR. UNREIN) Our customer for the Chevelon-Butte Wind Farm is a utility company within Arizona.

MEMBER HAENICHEN: Mr. Chairman?

CHMN. KATZ: Yes, Mr. Haenichen.

MEMBER HAENICHEN: Maybe this is an oversimplification, but if you only had the option to use the 500-volt, 500,000-volt line, couldn't that serve as a 300,000-volt line as well?

MR. UNREIN: Unfortunately, no. Our substations -- so when we go through this multi-year interconnection study process with APS, we build our substations for one voltage and we have to choose one

voltage because, again, the lines go to different places within APS's substations. And you can't -- it's just technologically not practicable for us to -- we can't step down the voltage and send 345 to APS's 500-kV line. That's just not possible, from an electrical engineering perspective, and it's not feasible to build two different project substations that you can toggle between two different voltages to two different points of interconnection. I haven't seen that done in my career and I don't -- I don't think that would be possible.

MEMBER HAENICHEN: So it's not really impossible, because the lines themselves, but there's ancillary equipment that has to merge with those lines, right?

MR. UNREIN: I really think one of the limiting factors with trying to have a dual voltage interconnection would, again, be that interconnection study process. I mean, we go through a multi-year study process per FERC tariffs and rules to ensure the safety and reliability of -- of the grid system. And you can't go through that study process with multiple voltages in the same request.

MEMBER HAENICHEN: Why not?

MR. UNREIN: I would need to defer to APS potentially as to, you know, compliance details of --

MR. ACKEN: I believe I can speak to that from a legal standpoint, that the interconnection process follows federal FERC requirements. And so those procedures about what interconnection voltage, how you interconnect, and what you can request and where is all set forth by federal rules.

MEMBER HAENICHEN: Okay.

Q. BY MR. ACKEN: So I do think it would be helpful, because there is a lot of questions about the interconnection process and the studies, to spend a little bit of time explaining what that interconnection study process is that you're engaged in with APS?

A. (MR. UNREIN) So in summary, the interconnection study process for large generator interconnection requests is a multi-year technical and engineering evaluation, multi-year, multi-phase technical study with the transmission owner, which in this case is APS. So long-term study that, again, identifies what, if any, network upgrades and other physical improvements are needed to maintain the safe and reliable operation of the transmission system. Again, under federal FERC jurisdiction, these -- these -- these multi-year studies follow federal FERC jurisdictions and tariffs and rules.

Q. And where are you at in the study process for the 345- and the 500-kV interconnection requests?

A. (MR. UNREIN) Sure. One quick thing I left out is entering into this study process, and then I'll tell you where we are at, is that APS's study process is a cluster queue system whereby you can submit requests two times per year, and those are studied in aggregate on -- on a cluster basis, instead of on a serial individual basis. So this is common for utilities, they don't study these requests individually, you aggregate biannually these requests and you study them in blocks. So the 345-kV queue position we entered -- we entered into the fall 2019 APS interconnection queue, and we received our System Impact Study this past summer in May 2022.

The 500-kV queue position was filed in the fall of 2020 interconnection cluster and the System Impact Study for the 500-kV position is expected in the near future. So, again, when we go back to AES making, you know, these strategic early-stage decisions, these -- these requests were made years ago.

MEMBER HAENICHEN: Okay. But after you complete all this and come to some conclusion and select one of those two options, is it possible that APS can weigh in and say no?

MR. UNREIN: Yeah, so -- so we described what the process is, where we're at. And, Bert, I think was

the next question were we going to talk about --

Q. BY MR. ACKEN: Let's skip ahead and answer -- I want to focus on the question that's been asked --

A. (MR. UNREIN) Yeah.

Q. -- which is a good one, which is what role does APS have in your -- in your connection request? And I think you testified that APS conducts the studies. And I think you testified that you have completed the System Impact Study. You have received the completed System Impact Study for the 345. You're awaiting it for the 500. Am I correct that there are additional studies that must yet be completed, which include, I believe, a feasibility study and then a large generator interconnection agreement?

A. (MR. UNREIN) Yeah, so going forward beyond the system impact studies, the 345-kV queue position, so it has its System Impact Study and it's in currently what's in -- what is called the Facilities Study, so System Impact Study, then you move to a Facilities Study. The 345-kV queue position in that vintage of interconnection requests, it studied 4 gigawatts of requested power generation --

Q. Mr. Unrein, let's focus on the Feasibility Study --

A. (MR. UNREIN) Okay.

Q. -- and then the next step, because there's multiple steps that we have to get through.

A. (MR. UNREIN) So the facilities study -- so the System Impact Study identifies broad network upgrades that would be required, based on the interconnection request. The Facilities Study goes into further detail and analyzes the engineering schedule and financial responsibilities for all those network upgrades that are needed to be completed to maintain safe and reliable grid operation, per FERC rules.

So System Impact Study, more detailed Facilities Study, and then where it ends is a Large Generator Interconnection Agreement, which is a legally binding contract between us, the applicant, West Camp Wind Farm, LLC, and the transmission owner, which in this case is APS. And that's a legally binding contract that stipulates each party's responsibilities to completing those network upgrades that are required for the safe and reliable operation of the grid.

So years of studies, then binding legal contract, all again, to identify what upgrades are needed to maintain the reliability of the grid.

Q. And so APS's role is to identify the additional upgrades that will be required; is that correct?

A. (MR. UNREIN) Yes.

Q. Under either option?
A. (MR. UNREIN) Yes. And that is their primary -- they study all of the impacts to their system, and APS identifies what -- what infrastructure would -- would require upgrades to facilitate those electrons coming onto their system.
Q. And APS will not enter into a large generation -- Generator Interconnection Agreement without assurance that the applicant or the interconnector would address all of the necessary upgrades to ensure the reliability and safety of the grid; is that correct?
A. (MR. UNREIN) That's correct.
CHMN. KATZ: What I would like to suggest is maybe we'll take our 15-minute break now, get ourself back on track. And I have something I needed to share with you very briefly. But it's about just past 2:30. We'll begin about 2:40 -- between 2:45 and 2:50.
(Recessed from 2:32 p.m. until 2:49 p.m.)
CHMN. KATZ: Sorry for the longer delay, but we're only a couple minutes past. And you feel free right now, Mr. Acken, to pick back up where you left off. And hopefully we can get the 345- versus 500-kV issue behind us, and we can move on to the environmental studies that were done in this matter.
MR. ACKEN: Thank you, Mr. Chairman. And we

appreciate the Committee's questions and active engagement. And we realize that this is a bit of a unique request, and so, you know, we want -- it's important to the applicant to obtain approval for both the 345 and the 500 interconnection request. And so we will spend -- answer any question the Committee might have in order to give the Committee comfort as to the request at issue.

Q. BY MR. ACKEN: So we've talked about the System Impact Studies, Feasibility Studies, and ultimately the interconnection agreement with APS. I want to take it back to the original question that Member Haenichen asked, which is why. Why are you asking for approval for both a 345-kV and a 500-kV interconnection?

A. (MR. UNREIN) We're seeking approval for a CEC that provides that optionality, so that we can provide our wind energy where it is needed on Northern Arizona's current transmission grid in the coming years when -- when our wind farm is built.

Q. And will you confirm that, ultimately, you will only build one or the other, but not both?

A. (MR. UNREIN) Yes.

Q. Thank you.

Mr. Gardner, you know there's another moving part in this proceeding, which is not atypical, which is

the request for multiple CECs. This Committee has seen the request and authorized multiple CECs in the Hashknife case, which I believe was case 187; Serrano, 186; and Atlas, 202, I'm sure there are others too. Those are the ones I'm familiar with.

Why are you requesting two CECs in this proceeding?

A. (MR. GARDNER) We are requesting two CECs at the recommendation and guidance of APS, who will own the switchyard and some of the project infrastructure under CEC-2.

Q. And describe the facilities which each CEC will cover? And I think using the figures, and if you could identify for the record, you know, when you're looking at a figure the page number, I think, would be helpful for those of us that are visual thinkers to understand which CEC is going to cover what.

A. (MR. GARDNER) Sure. So I think that Mr. Unrein described it best earlier. CEC-1 is going to be all project infrastructure that is ultimately owned by the applicant, AES. CEC-2 is all project infrastructure that will be ultimately owned by APS. So what that means tangibly is that for the 345-kV interconnection option, as you can see on slide 43 of the hearing, it notes, in the switchyard section, APS will own the switching

station and the transmission line coming out of the switching station up to the first pole structure. And we'll show this in our -- in our visual tour. It will be a lot easier to kind of see there for the visual thinkers and learners.

So AES, applicant, will own -- sorry, wrong button -- will own the line coming in. APS will own the switching station and the line tap on the 345-kV line. And that will be covered under CEC-2.

For the 500-kV option, APS will own the infrastructure, which is inside of this APS-controlled access area, outside to the first transmission pole structure, similar to the switching station. Applicant -- and that is covered under CEC-2 -- the applicant will own all other project infrastructure up to that point.

Q. And then the figure that is shown on slide 44, that reflects the area that will be covered by CEC-1; is that correct?

A. (MR. GARDNER) Yes, that is correct.

CHMN. KATZ: Would you show that on the map?

MR. GARDNER: So -- yes, sir. So CEC-1 will be all of the project infrastructure inside of the infrastructure siting area into the switching station. And the gen-tie line corridor, all the way up to the

Cholla Substation. And then CEC-2 will just be right at the point of interconnections for both.

Q. BY MR. ACKEN: Mr. Unrein, describe the typical tower structures that will be used for the gen-ties?

A. (MR. UNREIN) For the 345-kV option shown on the screen to the right, these would be typical steel monopoles with a maximum height of 195 feet. For the 500-kV interconnection option, the transmission structures would consist of dual poles with bracing in between at the same maximum height as the 345-kV option. And additional structured -- structured details can be found in Exhibit G of -- of our CEC application.

Q. Next describe the on-site project collector substations.

A. (MR. UNREIN) So the primary function of our on-site collector substation is to step the voltage up from 34.5-kV to the interconnection voltage of either 345- or 500-kV. So the energy that comes out of our wind turbines is 34.5. That energy will enter bus work in the substation prior to being routed into our main power transformer, and the substation also includes a wide range of typical switches and breakers and metering devices to allow for isolation and control of the wind energy coming out of our project.

Q. And will the substations be conceptually

similar, whether it's 345- or 500-kV voltage?

A. (MR. UNREIN) Yes. And in the circumstance with these collector substations, the primary difference is the rating of your main power transformer, otherwise, most of the balance of plant ancillary infrastructure is very similar.

CHMN. KATZ: 500, what was the substation that it connects to up north?

MR. UNREIN: The Cholla -- the Cholla Substation.

CHMN. KATZ: That's what I wrote down. I wanted to make sure we were speaking the same language.

Go ahead.

MR. ACKEN: Thank you.

Q. BY MR. ACKEN: Next I'd like you to describe the 345-kV switchyard that would be constructed if the 345-kV option is elected.

A. (MR. UNREIN) Sure. So the switchyard, its fundamental purpose is -- is similar to that of a substation, except that it does not change the voltage of the electricity. So it's -- it's to allow -- it has various breakers and metering and switches and electronic controls, so it, again, allows isolation and control of -- of the electrons. And this is the infrastructure that physically would tie into APS's existing line, and

it would -- it gives them operational control of these electrons.

Q. So next we're going to present the virtual tours. Before we do, Mr. Gardner, I'd like you to orient the committee to the conceptual gen-tie options that will be shown in the tour, starting with the 345-kV option.

A. (MR. GARDNER) So on the right screen on slide 53, you can see the 345-kV option. Again, this option is conceptual. It is sited entirely on private property within our greater wind farm area and infrastructure siting area. So for both of these tours we're going to be looking at a dual substation layout. So for here, there will be one collector substation in this section, one collector substation in this section. And then the 345-kV gen-tie line, which extends from those substations and eventually to the switching station, tied into the existing APS transmission line.

So we'll be seeing -- showing this virtual tour on the left, and you can see on the right the map of where it's going, and I'll be describing that as well.

(Virtual tour video played.)

A. (MR. GARDNER) So here we're zooming in on our infrastructure siting area. Here you'll see that first collector substation in this section, 32. We'll zoom in. And this is similar to what Mr. Unrein just described or

the same as what Mr. Unrein just described.

So this 345-kV line will come out of the collector substation and head south to the second collector substation. These are those steel monopoles that Mr. Unrein described. As you can see, the landscape here is very sparsely vegetated, fairly barren landscape. So here's that second collector substation. We'll go in and take a closer look. This is identical to the first collector substation. Again, this would be for a multi-phase build-out of the project that I discussed earlier. You can also see the wind farm infrastructure and turbines that would be present.

Here, we'll continue along the 345-kV gen-tie line, heading north to the switchyard section, where it will eventually tie into the grid. So now we're heading along the western part of the infrastructure siting area. Here you can see the three existing APS-owned transmission lines where we will cross. And then here you can see the point of change of ownership, which we discussed, so blue would be CEC-1, pink would be CEC-2. And then this is the switching station which ties into the existing 345-kV Cholla-Mazarzal transmission line.

Q. And next, I'd like you to do the same for the 500-kV option, first orient and then present the tour.

A. (MR. GARDNER) So, again, this is the 500-kV

option. This would utilize the same collection substation layout that the previous virtual tour shown -- showed. So the first collector substation would be in the southern section; the 500-kV gen-tie line would then come to the second collector substation, would extend north through the infracture siting area into the gen-tie line corridor to Cholla Substation, all on private property. And then here, it would change ownership going into Cholla. And that's where CEC-2 will begin. So we'll see that on the virtual tour here.

So, again, we're zooming in on the first collector substation in the southernmost substation section. Like Mr. Unrein said, from this perspective, the substations would look almost identical between the 345- and the 500-kV option. Here we'll start heading north. These are those structures that Mr. Unrein described. So this is the 500-kV gen-tie line, heading north to the second collector substation through our infrastructure siting area on private property.

CHMN. KATZ: And, again, this is the same route, beginning of the route as we were doing before, correct?

MR. GARDNER: Yes, sir. The line would be in the same area.

Here, the 500-kV line will begin heading north out of our infrastructure siting area to the gen-tie line

corridor to Cholla Substation. As you can see, and you will see, the land gets more barren and more sparsely vegetated as you head north.

So here we're exiting our infrastructure siting area. We would pass the three existing transmission lines. And now we'll be paralleling those transmission lines with our 500-kV transmission line in the 150-foot wide transmission easement, which we have secured with the private property owner. So we'll stay in that transmission easement heading north.

Again, the POCO, or point of change of ownership, here, will be shown where it goes from green to pink outside of the APS control area, so this would be CEC-2; the green is CEC-1.

Q. BY MR. ACKEN: What is the corridor for the right-of-way -- or maybe it isn't a corridor, what is the right-of-way which you are requesting for the 500-kV line once it leaves the infrastructure siting area?

A. (MR. GARDNER) So the gen-tie line corridor to the Cholla Substation, as is shown in the legend over here, that is almost entirely a 150-foot wide transmission easement, which we have secured with a single private property owner. So 150 feet wide outside of the infrastructure siting area heading north up until the APS-owned land outside of the Cholla Substation.

Q. And so you are able to make that request right away, quite narrow, because you already have acquired the land rights that you need for that transmission line?

A. (MR. GARDNER) Yes, we have the land rights secured for the entire project at this point.

Q. And, again, that's entirely on privately owned land?

A. (MR. GARDNER) That is correct.

Q. Next we're going to shift to the benefits associated with the project, the gen-tie, and then the wind project as well. Let's start off by describing the benefits of the project's location.

A. (MR. GARDNER) So I do want to start off by saying that a lot of these benefits stem from the wind farm, which we got approval for from Navajo County. However, this wind farm and these benefits would not be possible without the gen-tie interconnecting to the greater grid.

So, as we mentioned earlier, this project is in an incredibly remote area. It would utilize existing APS transmission infrastructure which APS rate payers have already paid for. It would allow for the existing uses, like cattle on this ranch, to continue and it would provide clean, reliable energy to Arizona and diversify the energy resources in Arizona without having a

significant impact on the surrounding area.

Q. What are the economic benefits associated with the project?

A. (MR. GARDNER) So, you know, the numbers on slide 60 on the left side, those job numbers stem directly from the Chevelon-Butte Wind Farm, which we are constructing just down the road from this project that we're seeking approval for. This is a foundation for a turbine, and, you know, these projects bring significant job impacts to the areas, so 400 -- over 400 on-site construction jobs during construction, between 20 and 30 long-term local jobs in Navajo County for the life of the project.

Additionally, we're looking at an approximate $1 billion capital investment in this area which would, you know, allow for approximately $46 million in property taxes to be paid in the county over the 30-year life of the project. Additionally, significant annual workers' salary payments for those people that are living out here. So, you know, massive job creation, massive economic benefits for Navajo County.

Q. We're now going to turn to the testimony on environmental compatibility. For this discussion we're going to start with Ms. Shin, who has patiently awaiting her opportunity. If you would, please provide an

overview of your environmental resource analysis.

A. (MS. SHIN) We conducted an environmental analysis for several resources, this includes jurisdiction, land use, and recreation, which is contained in the application Exhibits A, F, and H; biological resources, which are in application Exhibits B, C, and D; cultural and visual resources, which are in Exhibit E; and sound and interference, which is in Exhibit I.

Our overall approach to analysis was to identify the potential resources located within the gen-tie project area and to evaluate effects to those resources from either the 345- or the 500-kV interconnection option. By gen-tie project area, I mean the infrastructure siting area and the gen-tie line corridor to Cholla Substation that's been previously described. To identify resources and conduct our analysis, we did desktop reviews, as well as field reconnaissance. We also drew on studies that were completed for the larger wind farm site. And the resource effects that we'll discuss today are in consideration of both the 345-kV and the 500-kV interconnection.

Q. Let's start with jurisdiction and land use and describe your analysis for the Committee.

A. (MS. SHIN) To evaluate land use, we first

looked at the current land uses and land activities in the gen-tie project area and on the surrounding lands. We looked at land ownership and jurisdiction, as well as the zoning designations and the local plans and policies.

To identify other planned development within five miles of the gen-tie project, we conducted an online search, as well as sending agency outreach letters to the Navajo County Planning and Zoning Department, the Arizona State Land Department, Arizona Game & Fish Department, and the Bureau of Land Management Safford Field Office.

Q. What land uses did you identify surrounding the gen-tie project?

A. (MS. SHIN) The gen-tie project is located entirely on private lands in Navajo County. The predominant land uses in the gen-tie project area and surrounding lands is cattle ranching and electrical transmission facilities. There are no designated public recreation areas within the project; however, there is some public recreation and hunting access that occurs through the project area.

And the area surrounding the project is a sparsely developed rural area, I'm going to highlight on the map, that is located on slide 69, so on our right-hand screen here. We've talked several times about this, but I'm just going to run through it again. There

are three existing high-voltage electrical transmission lines that cross through the infrastructure siting area, as well as parallel the gen-tie line corridor to Cholla Substation.

There are additional high-voltage transmission lines that are located east of the project area, as well as up by the Cholla Substation. The Cholla Substation and the Cholla Power Plant are located near the northern terminus of the gen-tie line corridor to Cholla Substation. The unincorporated community of Joseph City is located approximately two and a half miles to the northwest of the Cholla Substation.

There are some residences or residential-type structures that are located within one mile of the project. Those residences are located near the northern terminus of the gen-tie line corridor to Cholla Substation, as well as near the Cholla Substation. There are also additional residences that are located in the rural Chevelon Canyon Ranch subdivision, and that is located on the west side of the infrastructure siting area.

Regarding other planned developments, there are three other utility-scale renewable energy projects that are proposed within five miles of the gen-tie project. Additionally, as we've discussed before, the

Chevelon-Butte Wind Farm is under construction approximately 15 miles to the west of this project.

Q. What are your conclusions with respect to the project's potential effects on surrounding land uses?

A. (MS. SHIN) The project would be compatible with existing land uses. There would be no change in jurisdiction or land ownership. The project would allow the existing land uses to continue. There would be some temporary restrictions on public access and hunting access through the project area during construction; however, the project would allow those uses to continue into the future.

This project would also be consistent with the other planned utility-scale development projects that are located within five miles. Regarding planning and zoning, utility facilities like the gen-tie project are permitted uses in the Navajo County zoning districts in which the project is located. And the utility facilities are consistent with the Navajo County land use plans.

It's important to note that the Navajo County Board of Supervisors unanimously approved a Special Use Permit for the wind project in September of this year.

Q. Next, we're going to turn to biological resources.

Mr. Graber, describe your evaluation.

A. (MR. GRABER) Our evaluation included a review of -- sorry, I'm going to start over -- our evaluation included a review of special status species in special areas that are listed by federal and state environmental review tools reports. That includes looking at the area within three miles of the gen-tie and four miles of the wind project.

We reviewed publicly available data sources including, for example, important bird areas and wildlife linkages. We had multiple discussions with Arizona Game & Fish and Fish and Wildlife Service that included data sharing with those groups. We conducted a site reconnaissance visit, and over the course of conducting preconstruction wildlife surveys for the wind project, for two years, became familiar with the project site, the habitat features, and so forth.

Q. Did you develop any plans in coordination with Fish and Wildlife and Game & Fish?

A. (MR. GRABER) So for the -- specific to the wind project, which includes the infrastructure siting area, we developed a wildlife survey plan that was in conjunction, yes, with Fish and Wildlife Service and Arizona Game & Fish that highlighted the surveys that were conducted for the past two years. Those surveys are also planned for next year. Those surveys include, for

example, raptor nest surveys, avian use surveys, eagle flight path mapping, and bat acoustic surveys. We also conducted a desktop evaluation of Waters of the U.S.

Q. As a result of all of the study work you've done to date, what type of wildlife have you identified that may be present in the study area?

A. (MR. GRABER) Yeah, so generally speaking, the wildlife that are present and that we would expect in the future are characteristic of juniper savanna and grassland habitats, which are ubiquitous habitats for Northern Arizona. The Little Colorado River will be spanned at the northern extreme of the line to Cholla. That river corridor is relatively sparsely vegetated, but could be used as a marginal stop-over habitat for migrant birds.

We determined that one federally listed species, Peebles Navajo cactus, and one federal candidate species, Monarch butterfly, could be present on site. To give a little bit more flavor of those two species: So the Peebles Navajo cactus has a very limited range, from Joseph City to Holbrook, essentially north of the highway, north of the gen-tie project. It requires specialized soils. We determined that those soils aren't present, based on the mapping that we're privy to, but that species could occur, and there's plans to evaluate

whether or not that species is present.

Monarch butterfly has a more extensive range of both breeding and migration range in Northern Arizona. That species can use or does use milkweed as its larval host plant and other native flowering plants that could be present within the project area.

As far as other special status species, we provided a list in Exhibit C of the application. Those include, for example, Pinyon jay, both eagle species, pronghorn, ferruginous hawk, and so forth.

Q. Mr. Gardner, Mr. Graber referenced the wildlife study plans with Game & Fish, but I'd like you to describe your coordination efforts with fish and state wildlife agency.

A. (MR. GARDNER) Yeah, so, you know, we've had extensive conversations with federal and state agencies beginning in January of 2021. Since then we've had an in-person meeting, multiple video and phone conversations with U.S. Fish and Wildlife Service, and Arizona Game & Fish. AGFD did provide a letter specific to our gen-tie project on recommendations and mitigation measures for this project. We had a follow-up conversation with AGFD to, you know, talk about those mitigation measures and make sure that we were all on the same page on those, and we did that.

So, you know, in addition to that, we are planning over the next few years as engineering on this project progresses to continue that coordination and continue working with those agencies to make sure that this project, you know, follows all the rules and does all the mitigation measures necessary.

Yeah, that's about it.

Q. Thank you.

Mr. Graber, describe the mitigation measures, that will be implemented with respect to biological resources.

A. (MR. GRABER) Yeah, the applicant will be following avoidance and minimization records, based on the recommendations that Arizona Game & Fish provided. Those include avian protection, Line Interaction Committee, avian design recommendations for reducing electrocution and collision risk for birds.

And what that looks like for this project, so where the line would cross the Little Colorado River, there would be avian flight diverters on that line. In addition, there would be appropriate separation between grounds and -- energized parts and grounds to accommodate perching eagles.

Spanning the Little Colorado River and other surface waters on-site, we'll provide the benefit of

avoiding the potential Waters of the U.S. and wetlands -- wetland wildlife species that could use those features. With regard to -- to avoiding Peebles Navajo cactus, the applicant is committed to identifying whether or not appropriate soil types are present at that northern extreme of the line. And if those soil types are present, then conducting surveys to identify individuals to inform siting.

With regard to the Monarch butterfly, the applicants -- the applicant would avoid milkweed and other native flowering plants, to the extent possible. Any disturbance areas will be re-vegetated with native pollinator friendly seed mixes, also to the extent possible. In addition, the project would minimize the introduction and spread of noxious weeds. And I think that's -- I think that's all I have.

Oh, sorry, wanted to remember one more thing. So active nests would be avoided in compliance with the Migratory Bird Treaty Act and the Arizona Revised Statutes.

CHMN. KATZ: Just clarify for me, again, if you would, I understand the Monarch butterfly, what was the other species of concern?

MR. GRABER: Yeah, so the Monarch butterfly is familiar to a lot of us. The Peebles Navajo cactus is

the other one.

CHMN. KATZ: People of Navajo cactus?

MR. GRABER: Sorry, it's called Peebles, P-e-e-b-l-e-s, Peebles Navajo cactus. It's a very small cactus, hard to see, that only exists in very specialized soil types, primarily northeast of the project site.

CHMN. KATZ: Thanks.

Q. BY MR. ACKEN: Mr. Graber, what are your conclusions with respect -- with respect to the project's potential effects on biological resources?

A. (MR. GRABER) So the project will not impact areas of biological wealth. There would be minimal impacts to special status species, given the limited project footprint, as well as the co-location with current infrastructure. And by implementing minimization and avoidance measures that I previously mentioned, this project would be compatible with the resource.

Q. Okay. Thank you.

Ms. Shin, let's turn next to cultural resources, which are described in Exhibit E to the application. Describe your evaluation.

A. (MS. SHIN) To evaluate cultural resources, an archival records search was conducted, and that looked at previous pedestrian surveys and previously recorded cultural resources within the gen-tie project area, as

well as a one-mile buffer of the gen-tie project area. That archival record search included searching online databases, which includes the AZSITE database, and the Digital Archaeological Records database. And those both house records from the Arizona State Museum, as well as other sources.

A review of the National Park Service's National Register of Historic Places database was also conducted, as well as looking at historical maps and aerial imagery. As a result of that archival research, we identified 89 historic sites, historic structures, and archaeological sites located within the gen-tie project area and the one-mile buffer; 23 of those sites are located within the gen-tie project area. And just to provide a little example of what those 23 sites are within the gen-tie project area, it includes an historic transmission line, which is APS's 69-kV Cholla to Kings Canyon line. It includes an historic cattle grazing area, as well as prehistoric Native American habitation sites. And those sites include sites consisting of features, which are likely campsites, as well as sites consisting of artifacts. And those artifacts include stone toolmaking debris, as well as ceramic fragments.

Q. Have you consulted with tribes that may have interest in this area?

A. (MS. SHIN) Yes, the applicant sent outreach letters to eight tribes that may have an interest in the area, in May of this year. We received one response to that outreach, and that was from the Hopi tribe. And they requested continued coordination on future cultural resource surveys in the project area.

Q. And what about SHPO, the Arizona State Historic Preservation Office, have you consulted with them as well?

A. (MS. SHIN) SHPO has been included on all of the project mailings for this project. Additionally, they were provided a copy of the application and exhibits for their review. We received a response from SHPO to the application. That response is included in WCW-7 in the supplemental exhibits. Their response confirmed that there are no cultural resources within the areas of direct or indirect effects of the project. And they also recommended that pedestrian surveys be conducted prior to construction.

Q. To that end and to the recommendation, what mitigation measures will be implemented to minimize and avoid potential impacts?

A. (MS. SHIN) Prior to construction, pedestrian surveys would be conducted in areas of proposed ground disturbance and identified cultural resources would be

avoided.

Q. And what are your conclusions with respect to the project's potential effects on cultural resources?

A. (MS. SHIN) Given the planned avoidance, there would be no effects to cultural resources.

Q. Thank you.

Next, describe your analysis of visual resources.

A. (MS. SHIN) Our analysis of visual resources began with an identification of designated scenic areas in the project area and five miles around the project. By "designated scenic area" I mean national or state parks, scenic overlooks or wild and scenic rivers. We then conducted a field visit to assess the characteristic landscape of the project area and surrounding lands.

Two photorealistic simulations were conducted for the project from key observation points or KOPs. We then conducted a visual contrast effects analysis to determine the effects on sensitive viewers. And the sensitive viewers for our project would include residences, recreationists, and travelers on area roadways.

Regarding the visual setting, we determined that there are no designated scenic areas within the project area or five miles surrounding the project. The

landscape is generally characterized by flat, open areas with minor undulations in topography. The area surrounding the project is mostly undeveloped. Where it is developed, it's been modified by roads, ranching infrastructure, the existing high-voltage transmission lines that we've previously discussed, as well as the Cholla Substation and the Cholla Power Plant.

Also, as previously discussed, the area around the project is sparsely populated. There are several ranch buildings and residential-type structures that are located within one mile of the gen-tie project, and again, those residences are located at the northern terminus of the gen-tie line corridor to Cholla Substation near the Cholla Substation, as well as west of the infrastructure siting area in the rural Chevelon Canyon Ranch subdivision.

Q. Next present the simulations that you prepared for the project.

A. (MS. SHIN) We prepared two visual simulations for the project, the first one that we're going to review is from Obed Road, and this simulation is done from approximately .9 miles south of the gen-tie line corridor to Cholla Substation, and I just want to orient you really quick to where that KOP is located. So on both slides 84 and 85 there is a small inset map that is

located on the left-hand side of the screen, and the KOP location is identified by the red dot, and the view that we are seeing in the photo is indicated by this gray triangle that's shown in here.

So from this view we are facing north towards the gen-tie line corridor to the Cholla Substation and the KOP line is located along Obed Road. And this view represents the view that travelers along Obed Road would have of the project. In the existing conditions, which are shown on slide 84 on the left-hand screen here, you can see that we have the paved Obed Road; we have some cattle fencing; there is a communication cell phone tower; and there is also existing distribution level and high-voltage transmission facilities that are within view.

So we'll now turn our attention to slide 85, where we now have simulated the gen-tie project. And in this view we are now looking at the 500-kV gen-tie line option. And this is the H-frame structures that we saw in the flyover, so I'm going to go ahead and point to where those structures are, because it can be a little difficult to see. But there's a structure here, here, and we're going to follow the structures are simulated throughout the entirety of this view.

The proposed project location and dash line that

you see at the top of the image here, this just represents that the project is simulated within the entire view. So the project is simulated from the left-hand side all the way to the right-hand side. As you can see in the simulation, the gen-tie project creates weak contrast and is absorbed into the existing landscape from this view, and it's repeating a lot of the same basic visual elements that are already in view.

We'll now turn our attention to the second simulation that was conducted, so this simulation was conducted on Siby Road, which is a private residential road located within the Chevelon Canyon Ranch subdivision. And, again, I want to orient you to the inset map on both slides 86 and 87, where the red dot is showing the KOP location and the gray triangle is showing our field of view.

From this location we're approximately .45-mile west of the infrastructure siting area, and we are facing east towards the project. In the existing condition photo on slide 86, you'll see that we have an unpaved road, as well as some residential fencing in the foreground. In the middle ground and background, we are seeing a mostly unmodified characteristic landscape.

We'll now the turn our attention to the simulated condition, which is shown on slide 87. In this

simulation we are now seeing the 345-kV interconnection option. These are the monopoles that we saw in the flyover. Similar to the previous simulation, again, we have our proposed project location dashed white line showing that our project is in view for the entire screen. And, yeah, I'm going to go ahead and show you here where the monopoles are, because they can be a bit difficult to distinguish. But you can see those monopoles here. They are the ones without the turbine blades on them.

In this simulated condition, you can see that the gen-tie line is creating new visual elements that are not presently found in the existing condition. And with that we have a moderate-to-strong contrast. It's also important to note, as you can see in the simulation, that wind turbines would be constructed in this view, and those would further modify the landscape.

Q. Present your conclusions regarding visual resource potential effects.

A. (MS. SHIN) Overall, there would be minimal visual effects from the project, because few people live near or pass through the project area, and there is existing infrastructure that's present in a significant portion of the project. As dem- -- as demonstrated through our simulations, where the viewer is looking at

the existing transmission infrastructure, our project creates weak contrast and repeats some of the same basic visual elements that are already in view. Where the viewer is closer to the project and the existing infrastructure is not in view, the project would have a moderate-to-strong contrast.

Regarding views from primary travel routes for travelers on the area roadways including State Route 377, State Route 99, and Interstate 40, the project would have a weak contrast, and that's primarily due to distance from the project intervening topography, as well as, again, views of the existing infrastructure.

Q. Next describe the analysis you conducted for sound and interference contained in Exhibit I to the application.

A. (MS. SHIN) For sound and interference, we considered the potential effects from construction and operations of the project in context of the existing conditions, as well as the location of noise-sensitive receptors.

As part of our evaluation, we measured the ambient sound level of the project area, and that was measured at a level 33.6 dBA or A-weighted decibels. And that ambient sound level is representative of a quiet rural environment. We then conducted a qualitative

analysis, using reference project that modeled sound for 345- and 500-kV transmission lines in similar environments. And those reference projects modeled under both fair weather and wet weather scenarios.

In preparing for this hearing, we identified an error in the stated attenuation distances that were included in Exhibit I in the section "anticipated noise during operation." A revised analysis for anticipated noise during operation is included in the supplemental exhibits, and that's marked as WCW-5.

Q. What are the potential effects of the project on ambient sound levels and communication signals?

A. (MS. SHIN) During construction, the sound levels from the project would be elevated above the ambient sound level in the gen-tie project area and the vicinity of the gen-tie project area. This is primarily due to the use of standard construction equipment, as well as helicopter use during line stringing at the Little Colorado River crossing.

These construction elevated sound levels would be short-term and temporary, and they'd also be limited to daylight hours. During operations, regarding construction noise for the transmission line, it's estimated that the corona noise would attenuate or be below the ambient sound level directly underneath the

transmission line in a fair weather scenario.

Under a wet weather scenario, it's anticipated that corona noise would attenuate below the ambient sound level, approximately 820 feet from the transmission line. It's important to note that during a wet weather scenario, the ambient sound levels would also be elevated due to sounds that are associated with wet weather, such as wind, rain, and thunder.

Given that, it's anticipated that corona noise, under both fair weather and wet weather conditions, would be either indistinguishable from the ambient sound levels or inaudible at the nearest noise-sensitive receptors.

For operations noise associated with the substation and switchyard facilities, the substation locations that we previously described are more than three miles from the nearest noise-sensitive receptor. The switchyard location is more than one and a half miles from the nearest noise-sensitive receptor. At these distances, it's anticipated that operations noise would be inaudible at the nearest noise-sensitive receptors.

Radio or broadcast television interference is not anticipated to result from this project. As previously described, residences in the vicinity of the project are also in close proximity to the three existing high-voltage transmission lines and an additive effect is

not anticipated.

Q. Thank you.

Now, I'd like -- or I'd ask you to present your overall conclusions with respect to the environmental compatibility of the gen-tie project.

A. (MS. SHIN) In my professional opinion, the project would be environmentally compatible. It would have a relatively small disturbance footprint. Much of the area has been impacted by the existing ranching activities. The project would allow for continued use of the land uses. The project would have no impacts to areas of biological wealth and minimal impacts to special status species. The project would avoid known archaeological or historical sites of significance. There would also be minimal visual and sound effects as the area is sparsely populated, and there are existing infrastructure within proximity to residences.

Q. There's been a lot of discussion today about the two options -- interconnection options, the 345-kV option and the 500-kV option. And, of course, at the end of the day, the Committee's job is to make a determination based on the environmental compatibility of the project. So I'd ask you directly, if there is any difference with respect to the environmental compatibility of the 345-kV interconnection option, as compared to the 500-kV

interconnection option?

A. (MS. SHIN) There are no material differences in the environmental compatibility between the 345- and the 500-kV interconnection options. And as I described at the beginning of the environmental section here, we evaluated the entirety of the gen-tie project area and considered the effects of both interconnection options.

Both options would be compatible with the existing land uses and would utilize existing electrical infrastructure. There's a negligible difference in permanent disturbance between the two options, and with the implementation of the mitigation and avoidance measures that we've described, there would be no material differences in environmental effects.

Q. Thank you.

We're going to shift from environmental compatibility to public outreach. And in so doing we're going to discuss public outreach that was conducted both for the CEC proceeding, as well as the Special Use Permit that was issued by Navajo County.

Mr. Gardner, summarize the public outreach efforts that were undertaken.

A. (MR. GARDNER) So as Mr. Acken stated, we conducted extensive public outreach for both the gen-tie project and the overall wind farm project. We published

a project website in April of this year. That project website contains important dates, applications, includes a public comment submittal form, where anyone can go on and ask questions about the project or give comments about the project. That comes directly to my e-mail and we respond to all of those.

In total, we sent out three informational and invitational letters to all property owners within one mile of the wind farm and the gen-tie project. Additionally, we hosted three publicly noticed meetings, two in Holbrook and one in Joseph City, for members of the community to come and give input and learn about the project.

Q. Ms. Shin, in addition to the public outreach efforts, describe how the public was notified of the project.

A. (MS. SHIN) The public was notified of the project in several ways. As Mr. Gardner described, three public notification letters were mailed to property owners within one mile of the project, as well as to local, state, and federal agencies. Those public notification letters included information about the project, project updates, the link to the project website, as well as the 1-800 phone number for the project. It also included notification of the public

meetings, as well as notification of hearing for these proceedings. The outreach letters also solicited public comment.

In addition to mailings, several newspaper legal notices were also conducted for the project. The public meetings were advertised in the Holbrook Tribune. Notices for these hearing proceedings were advertised twice in the Arizona Republic and additional legal notice was also published in the Holbrook Tribune.

Q. Did you also post signs in the vicinity of the project as well?

A. (MS. SHIN) Yes. Notice of Hearing signs were posted at four locations near the gen-tie project on September 9th. The notice locations are shown on slide 101 on the figure that's on the right-hand side of the screen, and those are identified by the star locations, which I am showing with my pointer here. Those sign locations were reviewed at the prefiling conference prior to posting.

Q. And how did you make the CEC application and supporting documents available for public review?

A. (MS. SHIN) The application, in addition to the ACC docket control, the application was posted on the project website, a copy of the application was sent to the Holbrook -- Holbrook Public Library for review,

copies of the application were also sent to the State Historic Preservation Office and the Arizona Game & Fish Department.

Q. Mr. Gardner, as a result of the public outreach efforts that you described, have you received any letters of support?

A. (MR. GARDNER) We have. We received one letter of support from the Joseph City Chamber of Commerce, which is the nearest town to the project. Additionally, we received a letter of support from Stephen Brophy, president of Aztec Land and Cattle Company.

Q. And those two letters are shown on slide 105; is that correct?

A. (MR. GARDNER) That is correct.

Q. And the letter from the Joseph City Chamber of Commerce has been marked for identification as West Camp Wind Exhibit Number 8; is that correct?

A. (MR. GARDNER) That's correct.

Q. And the Aztec Land and Cattle Company letter is contained in the application; is that correct?

A. (MR. GARDNER) That's correct, yup.

Q. And Aztec Land and Cattle Company owns the land on which all project facilities under both interconnection options will be sited; is that correct?

A. (MR. GARDNER) That's correct, up to the

APS-owned land just outside of the Cholla Substation.

Q. Thank you for that.

Mr. Gardner, was the CEC application prepared under your supervision and direction?

A. (MR. GARDNER) Yes, it was.

Q. And with the expansion of the corridor area entering Cholla on APS land that you described, and the revision to Exhibit I that Ms. Shin discussed, is the application complete and accurate?

A. (MR. GARDNER) It is, yes, sir.

Q. Panel, do you have any concluding thoughts for the Committee at this time?

A. (MR. UNREIN) Yes, Mr. Acken. I'd like to provide a few closing remarks and conclusions. So just -- just a few points of both reiterating, you know, unique benefits that pertain to this gen-tie line and some of the discussion we've had. This gen-tie line is entirely on private property. Furthermore, we have land rights secured to build all of the infrastructure that we're seeking approval for from -- from this Committee. Both of these interconnection options are within existing or planned development areas, so the 345-kV interconnection facilities, as shown there within our broader wind farm area. The 500-kV option parallels three existing transmission lines as soon as it

leaves -- leaves our wind farm area.

So both are squarely within existing development areas. Both utilize existing transmission infrastructure that rate payers have invested in and paid for in Northern Arizona. Both utilize existing transmission infrastructure. Both have been deemed, per our testimony today, to be environmentally compatible.

And today we're seeking to preserve the optionality of different interconnection voltages so that we can send the wind energy from our wind farm to the areas of Northern Arizona's transmission grid that need it. This transmission line, which has been diligently sited to avoid, minimize, and mitigate environmental impacts, has the ancillary benefit of enabling decades of environmental benefits from the wind farm.

And, in summary, this diligently sited wind farm -- or diligently sited transmission line would enable an approximate $1 billion capital investment in Navajo County. A capital investment that has been unanimously approved by the Navajo County Board of Supervisors, and a capital investment that, per testimony, is poised to bring decades of economic and environmental benefits to these communities who need it.

We're proud to be an existing corporate partner of Coconino and Navajo counties, as we're currently

constructing the last wind farm gen-tie line that AES proposed to this Committee in 2019. So we're happy to be existing corporate -- corporate partners with these communities. And we're excited to be bringing our next wind farm gen-tie line to you for your consideration to bring additional economic and environmental benefits to Navajo County, who needs it.

With that, we would like to thank you for taking the time to hear our testimony, to come to Flagstaff and hear our testimony, and learn about the West Camp Wind Farm Gen-Tie Project.

CHMN. KATZ: What --

MEMBER GRINNELL: Mr. Chairman?

CHMN. KATZ: Yes, go ahead, Mr. Grinnell.

MEMBER GRINNELL: The environmental compatibility, I understand all that part, but you're talking decades. What happens to these wind farms, and I realize we don't have jurisdiction over wind farms, but what happens to these areas that are being impacted with the physical existence of wind farms, solar farms, or whatever it is at the end of 30 years, because I was reading your stuff, it says 30-year project.

So what happens to all these facilities that you're building infrastructure for, power lines, gen-ties, what happens to all that?

MR. UNREIN: That's a great question. As you -- as you indicated, our modern turbine technology and all of the high-voltage infrastructure is designed for a minimum 30-year useful life. So with our operations and maintenance program, as we strive to be a very effective operator of our wind farms, 30-year useful life. At the end of that, we're legally required, via multiple means, to decommission the wind farm, remove our equipment, and restore the property to the greatest extent practicable to what it looked like when we were never there.

And when I say we're legally obliged to do that, our land arrangements legally oblige us to decommission, remove our equipment, and restore the property. And, furthermore, Navajo County's Special Use Permit legally obliges us to decommission, remove -- decommission and remove our equipment and restore the wind farm.

And we're actually required to post financial security prior to construction of our wind farms, per those requirements. So we have to post a financial security of the estimated decommissioning costs before we build it, in case AES were -- were to go away and leave the wind farm behind standing there.

MEMBER GRINNELL: And what about -- what about the gen-ties and the potential for 500-kV line, what happens to all that infrastructure?

MR. UNREIN: So we're similarly legally obliged to remove our equipment and restore the property via our land arrangements. And, yeah, so same.

MEMBER PALMER: Mr. Chairman?

CHMN. KATZ: Mr. Palmer.

MEMBER PALMER: Does your Special Use Permit provide for an option of refurbishing or restoring or renewing the equipment and continue to operate or would you have to go through another process to do that?

MR. UNREIN: Yes, so -- excuse me -- Navajo County's Special Use Permit, they are unique in that they essentially run in perpetuity with the land. And any major modifications to what we sought authorization for would require an amendment. So Navajo County Special Use Permits run for a long time, but yeah, if we were to repower and, you know, recommission the turbines with new technology, that would almost certainly trigger an amendment in the future that we would have to seek discretionary approval of.

MEMBER PALMER: I don't expect to last 30 years, but I fully expect Jack will still be here.

CHMN. KATZ: Speaking of Jack, Mr. Haenichen, did you have a question or a concern?

MEMBER HAENICHEN: I do. This is -- this is a general question that not only applies to this hearing,

but other similar hearings, where there are -- large amounts of generation are involved, even though we have no say over it. Here's my question for you: We learned today in testimony, I don't remember by whom, that here's the line coming out, and it's going to connect into an existing APS line. Well, that can't go on forever, because the line has capacity that it cannot be exceeded; is that not right?

MR. UNREIN: That's correct. And that -- that is the fundamental -- the fundamental reason for the interconnection study process that we've discussed is those years of --

MEMBER HAENICHEN: Yeah, but let's go back in time and then we'll go forward in time. When those lines that are -- have nothing to do with your project were originally installed, did they have a tremendous overcapacity for, depending on the current use needs? In other words, is there a lot of reserve transmission capacity on all these lines we see when we drive around the state?

MR. UNREIN: At some -- so I was not -- you know, I can't personally speak to, you know, the engineering assumptions and siting rationale that went into those lines that were built many decades ago. But the capacity on the transmission infrastructure proximal

to our site, those transmission lines used to be much more utilized from various coal plants, not just the Cholla Substation, but different coal plants in the Four Corners region. These electrons move hundreds of miles, and as that fossil fuel fire generation is coming offline, that is creating nominal capacity available for renewable energy projects.

MEMBER HAENICHEN: Okay. That's a good answer. But given that we all believe this state is growing rapidly and going to continue to do that, that replacement is just going to happen anyway, and then you're still going to need more capacity to -- to trailer electricity around the state. And I just wonder what the process is on those original lines when they were put in, in terms of capacity.

MR. UNREIN: Yeah, the -- I mean, the Western -- the Western Electrical Coordination Council, the WECC, transmission system it's a -- yeah, it's a very highly complex maze of transmission infrastructure that's been built around the decades, electrons can flow -- you know, our AC electricity can flow in both directions --

MEMBER HAENICHEN: Well, I understand that.

MR. UNREIN: You know, those -- those lines were built based on the thermal coal fire generation that was in existence at the time to move the electrons to

where -- where they're needed.

MEMBER HAENICHEN: Okay. But this -- you may not know the answer to this, is there some governmental entity, I don't care at what level you take this question -- that tells people when they want to build a transmission line, you've got to put in 50 percent extra capacity for future growth; does that happen?

MR. UNREIN: So the primary federal regulator on interstate transmission is FERC, the Federal Energy Regulatory Commission. As to the -- what they require for an overbuild of capacity to allow for other future reservations and customers, I do not know. I'm not aware of any specific, you know, threshold, oh, you have to engineer your line for 25 percent extra contingency, I'm not aware of any specific thresholds, and I think it's more on a case-by-case basis with those new interstate transmission lines.

MEMBER HAENICHEN: Okay. Now, on your project, though, when you want to hook into these existing lines, did you ask the owner of those lines how much capacity surplus there is?

MR. UNREIN: That's the multi-year interconnection study process that we've described. It takes me about five years to get that answer.

MEMBER HAENICHEN: Well, have you ever run into

a case where you develop a new large project like this 500 megawatt where they said we just don't have the capacity to get it to the main grid?

MR. UNREIN: So we try to be good -- we try to be good proactive renewable energy developers, such that this team would foresee that that constraint earlier in the development process than other people. And that's one of the reasons why we're successful in building our solar and wind farms is we carefully allocate resources to where we think a project is viable for a variety of reasons, and one of those big reasons is interconnection. But maybe someone, you know, without the experience of or without the foresight, they could end up in that situation where they fully, you know, develop something and they're going to construction and find out -- find that fatal flaw, but that would be unfortunate.

MEMBER HAENICHEN: Well, let's talk about your company now and this farm that you have committed to build. What -- do you -- how did you assure yourself that there will be a way to get it to customers?

MR. UNREIN: So before we go through that -- before and during that interconnection study process we have internal electrical engineers and external consultants that are highly specialized that help us look at that feasibility. So to your point, we didn't just,

you know, throw a 500-megawatt queue position in line with APS almost three years ago. We did a lot of analysis internally and externally, you know, four years ago before we put that -- put that request in.

MEMBER HAENICHEN: On any of your past projects have you ever faced where you did your diligence and then you went in and found out there was not enough capacity?

MR. UNREIN: So we -- we have several projects in our portfolio, and other large independent power producers like us would say the exact same thing, yes, we have other projects that are in our portfolio that we know are transmission-constrained, and we have those on the shelf waiting for other network upgrades and other changes in the interconnection process to start deploying resources again.

MEMBER HAENICHEN: Okay.

MR. UNREIN: So I have projects --

MEMBER HAENICHEN: On those particular projects -- this is my next question now.

CHMN. KATZ: Jack, Mr. Haenichen, pull your microphone a little closer, I think the court reporter is struggling.

MEMBER HAENICHEN: Oh, sorry.

What did you do to move the group of people who can correct that, to put more capacity in, please?

MR. UNREIN: To -- is your question to move -- or what do you mean "move"?

MEMBER HAENICHEN: Can use the surplus energy you were going to generate.

MR. UNREIN: Sorry, could you ask it one more time?

MEMBER HAENICHEN: Yeah. How do you assure yourself that there will be enough capacity in the thing you're hooking into?

MR. UNREIN: Oh. So, again, we -- we have our own internal and external consultants that analyze flow studies and the transmission grid based on, you know, historical transmission and infrastructure and planned upgrades. So we have, you know, entire teams internally and externally that are constantly evaluating feasibility of interconnecting solar and wind throughout the country.

And here, you know, in Arizona, speaking to this project in particular, many years ago, you know, the potential or actual plan closure of the Cholla Power Plant was announced, and folks know that there's going to be transmission capacity available proximal to the area for other forms of power generation. And, yeah, that's -- that's creating projects like this being able to utilize that --

MEMBER HAENICHEN: Yeah, that's replacing an

existing resource that's being decommissioned, but if the state continues to grow and millions more people come in, that's not going to be enough, right?

MR. UNREIN: Yes. That's -- that's correct.

MEMBER HAENICHEN: I'm just trying to understand how this works --

MR. UNREIN: -- that's like Western Spirit and SunZia, other cross-state transmission lines that have been -- that have been proposed.

MEMBER HAENICHEN: Oh, yeah, we were involved with those.

MR. UNREIN: So it takes -- it takes a lot of time to develop new transmission lines, but, yeah, it's being done --

MEMBER HAENICHEN: Yeah, it's expensive.

MR. UNREIN: -- coast to coast.

MEMBER PALMER: Mr. Chairman?

CHMN. KATZ: Yes, Mr. Palmer.

MEMBER PALMER: This is completely non-jurisdictional, but just for my curiosity, and I'm trying to remember what I've read if I saw anything, but does this project -- this wind project have any storage associated with it?

MR. UNREIN: Yes, our interconnection queue positions do include 250 megawatts of battery energy

storage.

MEMBER PALMER: Thank you.

MEMBER HAENICHEN: That is DC?

MR. UNREIN: So --

MEMBER HAENICHEN: You're storing DC?

MR. UNREIN: -- no, on the wind energy side it would be AC-coupled storage, because the electrons that flow out of our turbines are AC. There is a chance, depending on technology, that -- that wind energy in the future would be DC-coupled, so you'd put it through an inverter and do it DC-coupled.

MEMBER HAENICHEN: How do you store AC?

MR. UNREIN: It's an evolving technology.

THE REPORTER: I'm sorry, please, one at a time.

MEMBER HAENICHEN: How do you store AC energy?

MR. UNREIN: I'm not an energy storage expert, but there is AC-coupled -- there is AC-coupled energy storage proximal to project substations pretty -- pretty commonly.

MEMBER HAENICHEN: I'm not aware of it. I'm going to continue my search. Thank you.

MR. UNREIN: If I can do some more research tonight and speak with some of my colleagues that are much better technical experts at storage and bring any information back tomorrow, if that's --

MEMBER HAENICHEN: Yeah, put it simply, you can't use a battery to store AC.

MR. UNREIN: Yeah, there's electrical components that allow enough, there's micro-inverters that convert it to DC and then goes into lithium batteries and back out, I just don't know --

MEMBER HAENICHEN: These are all lofty prospects too. There are losses associated with doing that.

MR. UNREIN: Uh-huh.

MEMBER HAENICHEN: Okay. Thank you.

MEMBER FRENCH: Mr. Chairman?

CHMN. KATZ: Yes.

MEMBER FRENCH: Mr. Unrein, you mentioned 200 megawatts -- or 250 megawatts of storage, is that the same for either project?

MR. UNREIN: Correct.

MEMBER FRENCH: Thank you.

MEMBER GRINNELL: Well, Mr. Chairman, I'm just -- back to Mr. Haenichen's, if you're storing all this power, it must be DC storage; is that correct?

MR. UNREIN: I'm going to -- I commit to this Committee to consult some energy storage engineering experts and then be better prepared to speak to the potential battery storage component of this wind farm. It is worth noting that we included 250 megawatts of

battery storage as an option in our queue positions, paired with our wind energy, and that it's to be determined at a future date if storing this wind energy would be needed for customer. And secondly, be possible from -- from a taxation and a market perspective.

MEMBER GRINNELL: But aren't these battery storage facilities or alternative storage, aren't they part of the gen-tie connections?

MR. UNREIN: Yes, but in this case if battery storage were deployed, they would be located adjacent to -- adjacent to the collector substations. They would not -- the energy storage facilities would not be within the transmission lines or the substations subject of this CEC.

MEMBER GRINNELL: So how would you connect the battery storage systems to your substations, if they're not part of this CEC? Would you have to come back for another CEC connection?

MR. ACKEN: Member Grinnell, if I can hop in. I believe it's non-jurisdictional.

MEMBER GRINNELL: I understand that part, not the battery part, but the gen-tie would be a jurisdictional issue for this Committee.

MR. ACKEN: If the battery is receiving at 340 -- 34.5, and then being stepped -- and then when it's

being discharged, it's discharged at 34.5 to the collector substation, it would not be jurisdictional. So I think that -- I think that's the answer, but, you know, again, Mr. Unrein's committed. He's shaking his head, he may know the answer to this one to confirm, but, you know, we'll make sure we've got the answers for you tomorrow on all of the battery questions.

But -- but, bottom line, if a battery is -- if both the input and the output of the battery is below 115 kilovolts, it's not jurisdictional.

MEMBER GRINNELL: Oh, that part I -- that part I understand, but you're connecting eventually to your two big power lines and also to your -- so I guess that's where the confusion is for me a little bit.

MR. ACKEN: Yeah, and if I can take a swing at it, and Mr. Unrein correct since you're testifying under oath, I believe that's where the collector substations come into play. And we are seeking approval for the collector substations. So the output for the batteries, if it's at 34.5, goes to the collector substation, where it will be stepped up to jurisdictional transmission voltage. And that's why we are seeking approval for the substations.

Q. BY MR. ACKEN: Mr. Unrein, can you confirm or correct?

A. (MR. UNREIN) I can confirm that that's correct. Any stored electricity coming from battery storage facilities would be fed at medium voltage into the collector substation on that bus work, just like the mini circuits of collection lines coming from our wind farm.

MEMBER HAENICHEN: Yeah, but you can't step up DC, it has to be AC. So there's constantly going back and forth. You store it as DC and you then convert it to AC, and use a transformer to change -- transformer to make a higher voltage.

MR. UNREIN: That's correct. It would be stored out -- outside of the substation and would be converted to medium voltage AC and then enter the substation bus work just as if it were a collection line circuit coming from a group of wind turbines.

CHMN. KATZ: I was going to try to avoid going here, but I'm going to. Are you familiar with the October 4th letter from the Arizona Corporation Commission and their recommendations to this Committee?

MR. UNREIN: Yes, Chairman.

CHMN. KATZ: And one of the things I'll just quote from, it says, "Since the proposed project includes two different levels of interconnection at the Cholla Substation, separate studies needed to be conducted to determine the effects, if any, on the transmission

system. APS conducted a cluster System Impact Study," again, a cluster System Impact Study or SIS "for the 345-kV option. This study evaluated the effects of the 345-kV option, along with other projects in the APS interconnection queue and concluded there could be negative impacts on the APS transmission system and would require new transmission lines and transformers be constructed to mitigate the effects," but then there's a big however. "West Camp stated a very small portion of the identified impacts would be attributable to the 345-kV project, and that if any of the other projects in the study cluster were withdrawn from the queue, transmission system impacts would be diminished or eliminated. The applicant indicated that a facility study would be done on the approved" 435 -- "445-kV line early in 2023, to further any potential system impacts," and also it further indicates that APS with -- in conjunction with your company would be studying a 500-kV option. And I'm just wondering who -- who else was involved in that cluster study, if you even know?

MR. UNREIN: So the -- the specific legal entities and owners of various interconnection requests is not publicly available information. But, in summary, that -- that fall 2019 345-kV cluster studied many, many thousands of megawatts of potential interconnection

requests from that cluster, as well as many thousands of megawatts of previous clustered generator interconnection requests. So about seven gigawatts in total. And APS is required to study each of those in an indiscriminate fashion regardless of actual feasibility of the request or viability of the project being built, so that is, it's somewhat typical for us to see. You know, the initial study process studied a large group, and the study --

CHMN. KATZ: And it's more up to APS with input from you to do that further study, correct, regarding either the 345-kV or the 500-kV lines?

MR. UNREIN: Correct. After the System Impact Study you, as the applicant, can choose to continue the study process or end it and leave the -- leave the queue.

CHMN. KATZ: But I'm assuming, though, if you were to leave the queue this particular project wouldn't be built?

MR. UNREIN: If we -- if we abandoned our interconnection queue positions, we would have to -- you have to get back in line, essentially. You'd have to file again and get back in the multi-year line.

CHMN. KATZ: And one of our committee members, who isn't present, after reviewing the letter presented a question and I'll read it. What -- and it was Member Little: "What is likely to happen if the CEC is granted

but sometime during the construction of the project it is determined that there will be system problems if the project is connected?" Or asking it another way, would you be waiting until you got clearance through appropriate studies before building out this project, only to be told it's too late now, you spent all this money, but you can't hook into our existing system?

MR. UNREIN: We would never be in that situation, because we need a Large Generator Interconnection Agreement with APS in order to legally commence construction of our wind farm.

CHMN. KATZ: And that's really what I wanted to confirm is you're not going to be building the wind farm or the transmission lines without first getting that agreement approved by your company and by Arizona Public Service?

MR. UNREIN: That's correct.

CHMN. KATZ: I don't know if I opened up anything you wanted to follow up on or any of the committee members wanted to follow up on?

MR. ACKEN: Thank you, Mr. Chairman. Not on behalf of the applicant at this time. We're happy to answer any more questions the Committee has this afternoon. You know, we have a little bit of homework that we need to address tomorrow morning. If there are

other questions that we need to take up tomorrow morning, we're happy to do that as well.

CHMN. KATZ: Anything further from either our virtual participants or from our in-person participants on the Committee?

(No response.)

CHMN. KATZ: Well, if that's the case, we're going to unfortunately, or fortunately, have to take a recess and wait until 5:30 p.m. And what might happen is what happened in our last hearing, we waited until 5:30 and no members of the public showed up.

But in the event there is interest from the Navajo County community and surrounding property owners, we want to give them a chance to address us, either in person or virtually. So we're going to recess until 5:30. It will give some of us an opportunity to actually move luggage into our respective rooms. But we do stand in recess, unless there's some reason not to.

MR. ACKEN: No. Thank you, Mr. Chairman.

(Recessed from 4:14 p.m. until 5:34 p.m.)

CHMN. KATZ: Mr. Grinnell is present, and I think Karl Gentles is present. I don't know whether Daniel -- Daniel Schwiebert is present. He doesn't appear to be. But we have one, two, three, four, five, six, seven of us. We've got a quorum and can go ahead.

And I believe there are two members of the public that wanted to virtually communicate with us.

And are they able to hear what we're saying right now?

The two virtual, since there's only two of you, we'll let you ramble a little bit, but it's not going to be question and answer. We're not allowed as a Committee to respond to individual members of the republic -- of the republic -- of the public and of the republic -- we can only listen to what you have to say and take that into consideration during our deliberations. And I'll let our IT people decide which of the two folks will go first.

AV TECHNICIAN: Mr. Chairman, let's begin with Clare.

MS. BELLENDIR: Hi, can you hear me?

CHMN. KATZ: Yes, we can hear you fine. Just state your first and last name.

MS. BELLENDIR: Yeah, it's Clare Brophy Bellendir, and I'm with Aztec Land and Cattle.

CHMN. KATZ: Yeah, and I know one of the Brophys went to Xavier -- I mean, Xavier, and swam with my daughter Amanda years ago.

MS. BELLENDIR: I swam with Mandy.

CHMN. KATZ: Yeah, Mandy is my kid. I'll make

sure to say hello. And I know Stephen is there, and I had a matter with the Land Department involving him a few years back. But, Ms. Brophy, please go ahead and speak your mind.

MS. BELLENDIR: You know, I'm going to defer to my father, and he's on the line as well, and our opinion is one and the same.

CHMN. KATZ: Okay.

MS. BELLENDIR: Thanks for hearing us.

CHMN. KATZ: Glad to do it. Glad to hear from you and glad you're doing well. Are you living up north now?

MS. BELLENDIR: I live in Phoenix, and my daughter attended Tutu School with your granddaughter.

CHMN. KATZ: Okay. Sounds good.

Is it Stephen, then? Or your father's more than welcome to address us.

MR. BROPHY: Chairman Katz, can you hear me?

CHMN. KATZ: I can hear you just fine.

MR. BROPHY: Thank you very much. I'm Steve Brophy. I run Aztec Land and Cattle Company. We are the landowner over whose land principally this transmission line that's under your consideration crosses. The reason it does is because it is intended, as perhaps you've been briefed, to serve a project, a wind energy project, which

is located by and large on our land.

It's an obvious statement, but we support it, number one. Number two, we do so because, and this is not your concern, but rather our motivation, we think that wind energy project done by this company, which is, in our experience, a fantastic company, very professional, is a good use for our land, but I'd also like to make maybe a larger point, and I say this to you all as an adjunct of the Arizona Corporation Commission, and therefore, either directly or, by implication, responsible for the best interests of power consumers of the utilities you regulate, in this case Arizona Public Service.

The switchyard to which this gen-tie is intended to connect serves some major power lines, a 500-kV, two 345-kV lines, which were constructed years ago by Arizona Public Service to interconnect, I think, Four Corners, Cholla, and the Phoenix load area. And if you look at a map of the north, probably 30 miles of those power lines, they cross our land. And together with the SRP lines that both interconnect and cross our lines are a basic maze of power lines that were constructed to serve coal powered plants built in the '60s and '70s. And they were constructed on our line not only without opposition -- on our land, not only without opposition, but with support,

because we thought that would benefit Northern Arizona and the state.

Those power lines, I need not tell you, are a multi-billion dollar electrical energy freeway whose primary source of generation is going away. And this project and others, probably ones that will come to your attention in the future, are intended to fill the gap that is being created by the -- the diminution, and I presume the ultimate disappearance of coal. So for our purposes, the land use that this enables and the reuse of the power assets that belong to APS but have been paid by rate payers -- paid by rate payers in the Phoenix load area, are being served with a second use and a second life. We think altogether, just from our vantage point are a worthy project, and we urge your favorable consideration of this matter. Thank you.

CHMN. KATZ: Thank you. And I'll just ask you one question totally unrelated to these proceedings. I'm assuming you're the same Stephen Brophy that I met with several years ago. I represent the Land Department, and there was the lumber mill closing down and there were aquifer permits that were required. I don't know if that's you or one of your relatives.

MR. BROPHY: No, it's me. And it left me with the same hairline that you have. But the end result has

been very, very favorable. And very important for Northeast Arizona. Thank you.

CHMN. KATZ: And I'm glad, and all I can say is I have far less gray hair this year than I did last. Anyway, Mr. --

MR. BROPHY: I'm going the other direction.

CHMN. KATZ: Okay. Anyway, Ms. Brophy and Mr. Brophy, thank you both for your participation. We will take what you have to say into consideration and appreciate you taking the time out of your day to do so.

MS. BELLENDIR: Thank you, Chairman Katz. Take care.

MR. BROPHY: Thank you.

CHMN. KATZ: I'm assuming we don't have anybody else?

AV TECHNICIAN: Mr. Chairman, that is everyone who is on Zoom.

CHMN. KATZ: Let me just ask, is anyone in the back of the room that is a member of the public that might wish to fill out a form and address us?

(No response.)

CHMN. KATZ: Looks like they're all familiar people back there. So we'll stand in recess for the day.

And oh, Mr. Grinnell --

Well, off the record.

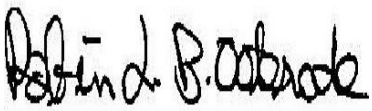
(Proceedings recessed at 5:45 p.m.)

STATE OF ARIZONA)
COUNTY OF MARICOPA)

BE IT KNOWN that the foregoing proceedings were taken before me; that the foregoing pages are a full, true, and accurate record of the proceedings all done to the best of my skill and ability; that the proceedings were taken down by me in shorthand and thereafter reduced to print under my direction.

I CERTIFY that I am in no way related to any of the parties hereto nor am I in any way interested in the outcome hereof.

I CERTIFY that I have complied with the ethical obligations set forth in ACJA 7-206(F)(3) and ACJA 7-206 (J)(1)(g)(1) and (2). Dated at Phoenix, Arizona, this 16th day of October, 2022.



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