BEFORE THE ARIZONA POWER PLANT AND TRANSMISSION LINE SITING COMMITTEE

LS-295

IN THE MATTER OF THE APPLICATION OF UNS ELECTRIC, INC., IN CONFORMANCE WITH THE REQUIREMENTS OF A.R.S. § 40-360, ET SEQ., FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AUTHORIZING THE RIO RICO TO HARSHAW 138 KILOVOLT (KV) TRANSMISSION LINE PROJECT, WHICH INCLUDES THE CONSTRUCTION OF A NEW 138 KV TRANSMISSION LINE ORIGINATING AT THE PLANNED RIO RICO SWITCHYARD (SECTION 12, TOWNSHIP 23 S, RANGE 13 E), AND TERMINATING AT THE PLANNED HARSHAW SUBSTATION (SECTION 32, TOWNSHIP 22 S, RANGE 16 E), EACH LOCATED WITHIN SANTA CRUZ COUNTY, ARIZONA.	DOCKET NO. L-00000F-23-0060-00218 LS CASE NO. 218 EVIDENTIARY HEARING

At: Nogales, Arizona

Date: April 18, 2023

Filed: April 24, 2023

REPORTER'S TRANSCRIPT OF PROCEEDINGS

VOLUME II
(Pages 213 to 376)

GLENNIE REPORTING SERVICES, LLC
Court Reporting, Video & Videoconferencing
1555 East Orangewood Avenue, Phoenix, AZ 85020
602.266.6535 admin@glennie-reporting.com

By: Jennifer Honn, RPR
Arizona CR No. 50885

VOLUME I	April 17, 2023	Pages 1 to 212
VOLUME II	April 18, 2023	Pages 213 to 376
VOLUME III	April 19, 2023	Pages 377 to 433

INDEX TO PROCEEDINGS

INDEX TO THE TOUR

INDEX TO EXAMINATIONS

INDEX TO EXHIBITS

INDEX TO EXHIBITS (continued)

NO.	DESCRIPTION	IDENTIFIED	ADMITTED
UNSE-6C	UNSE Ten-Year Plan for 2021 (Jan. 31, 2021)	42	316
UNSE-7	Exhibits Regarding Notice Requirements	62	316
UNSE-7A	Notice of Hearing	62	316
UNSE-7B	Affidavits of Publication and Tear Sheets for Nogales International	63	316
UNSE-7C	Tear Sheet for Patagonia Regional Times	63	316
UNSE-7D	Signed Library Transmittal Letter	64	316
UNSE-7E	Map of Notice of Hearing Sign Locations	65	316
UNSE-7F	Photographs of Sign Placement	65	316
UNSE-7G	Example of Sign Contents	66	316
UNSE-7H	Notice of Service to Affected Jurisdiction	64	316
UNSE-7I	Email Receipt from Board of Supervisors	64	316
UNSE-8	Receipt of Filing Fee	67	316
UNSE-9	Letters of Support	314	316
UNSE-9A	Nogales-Santa Cruz County Chamber of Commerce & Visitor Center	314	316
UNSE-9B	Mayor of Nogales	314	316
UNSE-10	Virtual Tour	72	316
UNSE-11	Tour Itinerary/Script/Protocol	100	316

INDEX TO EXHIBITS (continued)

NO.	DESCRIPTION	IDENTIFIED	ADMITTED
UNSE-12	Summary of Public Outreach	67	316
UNSE-13	Testimony Summary of Brian Lindenlaub	122	316
UNSE-14	Proposed Certificate of Environmental Compatibility	315	316
UNSE-15	Responses to Stakeholders	314	316
UNSE-15A	February 23, 2023 Response to Marshall Magruder	314	316
UNSE-15B	February 23, 2023 Response to Members of Lake Patagonia HOA	314	316
UNSE-15C	April 13 Letter from Staff re Project Impacts	314	316
UNSE-16	Updated Virtual Tour	73	316
UNSE-17	August 15, 2022 Letter from Kinder Morgan	384	385
SOUTH32-1	PowerPoint presentation	329	373
CHMN-1	Proposed Form of CEC	399	For Reference
CHMN-2	CEC with Edits	399	For Reference

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 Quality Inn Americana, 639 North Grand Avenue, Nogales, Arizona, commencing at 8:58 a.m. on April 18, 2023.

BEFORE: ADAM STAFFORD, Chairman

GABRIELA S. MERCER, Arizona Corporation Commission
LEONARD DRAGO, Department of Environmental Quality
DAVID FRENCH, Arizona Department of Water Resources
JAMES PALMER, Agriculture Interests
MARY HAMWAY, Incorporated Cities and Towns
RICK GRINNELL, Counties (recused)
(via videoconference)
KARL GENTLES, General Public
(via videoconference)
MARGARET "TOBY" LITTLE, PE, General Public

APPEARANCES:

For the Applicant:

Meghan H. Grabel
Elias J. Ancharski
OSBORN MALEDON
2929 North Central Avenue
21st Floor
Phoenix, Arizona 85012

and

Megan Hill, in-house counsel
TUCSON ELECTRIC POWER COMPANY
88 East Broadway, MS HQE910
P.O. Box 711
Tucson, Arizona 85702

APPEARANCES: (Continued)

For South32:

Albert H. Acken
ACKEN LAW
111 East Dunlap Avenue
Suite 1-172
Phoenix, Arizona 85020

and

Todd Gwillim, In-house counsel
SOUTH32

For Ernest F. Edwards (Limited Appearance):

Ernest F. Edwards
In propria persona

CHMN STAFFORD: Let's go on the record. Now is the time set for the tour in the line siting matter 218. I guess we'll take roll.

Member Drago.

MEMBER DRAGO: Len Drago representing the Department of Environmental Quality.

MEMBER FRENCH: David French, Water Resources.

MEMBER LITTLE: Toby Little representing the public.

MEMBER MERCER: Gabby Mercer, designee of the chairman of Arizona Corporation Commission.

MEMBER HAMWAY: Mary Hamway, cities and towns.

MEMBER PALMER: Jim Palmer, agriculture.

CHMN STAFFORD: The applicant has a safety briefing for us before we get started on this tour. Please proceed.

MR. BRYNER: Yes. Roberto Guevara, the director of our UNSE operations, is going to provide that.

MR. GUEVARA: Good morning. I'm standing up, for the record.

Good morning. As you know we're going to be going to rural areas and it's hot enough lately that we are seeing the snakes come out. We found some rattlesnakes recently in one of our transformers, so pay attention to that. And I know we are looking for those

on the ground but they could be up in the trees, too.

So look up, look down. Be aware of your surroundings. Be careful where you step, there's rocks and uneven surfaces. Be very careful with traffic. If we get out the vehicles, we're going to be close to traffic. Please keep an on eye on that. And hope for a safe trip. Any questions?

MS. GRABEL: Thank you.

CHMN STAFFORD: So at each stop, we go on the record and all questions and presentations, questions from the members and information from the applicant will be on the record. So we can go off the record now and get on the bus.

MR. BRYNER: Hold on. I have one safety thing I want to share if it's okay. I wanted to provide a little bit of context for the tour, since we're not planning to stop at stops 1, 2, or 3. Rather, our first stop will be stop 4.

So as we go along to what would have been stop 1, which would be the switchyard site, we're going to take a route that takes us along Old Tucson Road. Old Tucson, our existing 138 kV line goes down that road. That's built to the same standard and specifications as our proposed line, so that will give you a good feel for what the line will look like.

It will also give you a kind of a good feel for what that line would look like adjacent to the roads, similar to what would be on Pendleton Road. The difference being this line will be right adjacent to Old Tucson Road, whereas our proposed line will be offset generally by a couple hundred feet out off of Pendleton Road. So I want you to take a look at that. So that'll be probably two miles into our tour. So a few minutes.

We'll be going down Grand Avenue from when we turn off here right now, that'll be Old Tucson to take a look at that.

Another thing that I want you to take note of, after we've gone to the -- when we get to the switchyard site I'm going to have the tour vans just stop at that site for a minute so you can look out the window.

It will be out the left-hand side of the window or the north side, and you'll be able to overlook the switchyard site. I know at the public comment yesterday it was brought up that the switchyard was in a location that had the potential for flooding.

I think you'll be able to notice that it's elevated quite a bit around the surrounding areas and that that won't be an issue.

Another thing, we'll be driving along the road overlooking the Santa Cruz River valley shortly after the

switchyard site. So if you can, again, it's going to be out the left-hand window, so if you can get seats on the left-hand side of the bus that might be your best views because as we're driving along there you can kind of -- you'll be able to see Pendleton Road on the other side of the river, you'll be able to see the river, so you'll be able to imagine where the line goes in between those and give you kind of a good context for that.

Another thing, we're going to be driving down Pendleton Road itself. I know that was an area where we're really in the closest proximity to the homes. And you'll see the homes on the east side of the road. Again, out of the left-hand -- out of the left-hand side of the vans at least on our way out.

On the right-hand side or the west side of the road is where the line will be. You'll see a barbed wire fence. So that barbed wire fence is the edge of the road right-of-way, and where the private land begins.

So our intention will be to have the line on the west side of that barbed wire fence. So if you're trying to get a feel for where that line would be with respect to those homes, that will give you good indication of that.

One other thing that I want to point out to you, I know this is a lot to remember, so do your best because

I know we can't speak in the buses. Once we get onto Highway 82, we'll drive past the Nogales International Airport.

Shortly past that, we'll get up to Cumero Canyon. You'll notice that because we'll be up high, you'll be looking down, you'll have great views looking out. That where's we had a photo simulation from. And if you can kind of imagine, again, the line will be located about a mile north of that canyon crossing is where we'd cross the highway.

So gives you a little bit of context and then shortly after we go down that canyon and up is when the line will start paralleling the highway from that point until we get to Lake Patagonia Road, which is where we'll stop. So that's all you need to remember until then and then we'll talk more.

CHMN STAFFORD: Also just remind everybody that any communications about the line need to be on the record, so the applicant can't be answering questions and the members can't be asking questions of the applicant while we're on the buses. We need to have the bus stopped, the court reporter ready, any communications about what we're seeing.

So if we have to -- if someone -- I would advise members to hold their questions till the end to the first

stop, which is now stopped, for which is the first stop, until that point. If not, then I guess we'll have to add -- we'll have to pull over and stop and set up and ask questions. But I don't anticipate that having to happen. But remind everybody, communication needs to be on the record in front of the court reporter, so don't ask the applicant. Applicant, don't answer.

MEMBER PALMER: I know we can't ask questions, but can we say this is Cumero Canyon?

CHMN STAFFORD: No, no.

MEMBER HAMWAY: Yeah, they can. They've always done that.

CHMN STAFFORD: It needs to be on the record, because if they're giving a narrative what you're seeing it's not on the record, it needs to be on the record. So we need to stop and explain, show what it is. It can't be -- communications need to be on the record.

MEMBER HAMWAY: Well, he's already said it so he knows what we're going to say. I don't see the problem with him telling what we're about to see. Because I think then the tour becomes less valuable, because honestly I don't know what I'm seeing. So I need someone to tell me what I'm seeing so I don't know how we get around this.

CHMN STAFFORD: Well, I guess we could -- I

think it'll work on the bus, won't it?

MEMBER HAMWAY: No, no. She can't do that.

MS. GRABEL: And she actually isn't feeling very well. She was going to trail us in the car.

CHMN STAFFORD: Oh, really. Okay.

MEMBER HAMWAY: We've never had a problem with that.

CHMN STAFFORD: Well, the communications need to be on the record. I mean, he's already told us what we're going to see.

MEMBER PALMER: We're not asking questions.

CHMN STAFFORD: He --

MEMBER HAMWAY: We're not asking questions.

CHMN STAFFORD: If he voices exactly what he said now on the record at the time, then that would -- I think that will be all right.

MEMBER HAMWAY: We know not to ask questions.

CHMN STAFFORD: No follow-up questions, no --

MEMBER HAMWAY: No, no, we know better than that.

CHMN STAFFORD: -- no further details. If he can repeat what he said here on the record as we drive past it.

MEMBER HAMWAY: We've done scores of tours. We know how to behave, but we have to know what to look for.

MR. BRYNER: So if I point out the existing line, if I point out that's the switchyard site, that's Cumero Canyon, that's that barbed wire fence.

MEMBER PALMER: Nothing else.

MR. BRYNER: Those are okay.

CHMN STAFFORD: Right. No follow-up questions.

MR. BRYNER: All right. Can I bring up one last thing? Sorry.

CHMN STAFFORD: Okay.

MR. BRYNER: It was just --

CHMN STAFFORD: This is it.

MR. BRYNER: An option that was brought up if you're interested in being able to see sort of that vacant ranch land area, when we get to Calabasas Park which we would just drive our vans down to and then flip around at, we can take a dirt road up to a viewpoint right in that area, so you can look out to the east and kind of see -- see that area if you have interest in seeing what that area looks like.

It's not on the tour but it would just take a couple minutes to -- to do. So if you're interested, we wouldn't stop.

MEMBER HAMWAY: I think so.

CHMN STAFFORD: Yes.

MEMBER PALMER: I want to point out that that

would be a location to have a bathroom break if you needed one.

MEMBER HAMWAY: Okay.

MR. BRYNER: At Calabasas Park there's a bathroom.

CHMN STAFFORD: Any more last things?

MR. BRYNER: No.

CHMN STAFFORD: All right. Thank you. With that, let's go off the record and get on the bus.

(TIME NOTED: 9:08 a.m.)

(Beginning of route tour.)

(TIME NOTED: 10:19 a.m.)

(Arrival at first stop: Stop No. 4.)

CHMN STAFFORD: Let's go on the record. Tell us what we're looking at, please.

MR. BRYNER: So we're at stop 4 on the itinerary, so it's the State Route 82 right there to the east and this is Lake Patagonia Road that we're adjacent to.

So this is essentially the entrance to the Lake Patagonia Ranch community. So you've got, what, HOA units A and B. And then you've got the San Gabriel Estates just to the south of us, so this road just on the other side of the van here is San Gabriel Road. And from

the public comment yesterday I understand that that's where a couple of new homes are being built is down that road.

MEMBER HAMWAY: Which way?

MR. BRYNER: Just on the other side of the van. So that would be the south, southwest of us.

MEMBER HAMWAY: So this is still part of the planned development?

MR. BRYNER: A different subdivision, but yes, it would be all part of the same residential area, I would call it. The same residential land.

And so our line in the area both are -- well, it would be a common route and then in this section right here would be just on the other side of State Route 82. So it wouldn't be an ADOT right-of-way, it would be on the other side.

CHMN STAFFORD: How far away would it be from the 82?

MR. BRYNER: We will be looking at a couple hundred feet away. It's on the Forest Service right there. So we would be working with them to secure that right-of-way. But we're looking to offset it by a little bit. We understand there's some sensitivities with respect to the viewsheds highway.

(Reporter clarification.)

MR. BRYNER: Sorry. Traffic.
CHMN STAFFORD: You're talking about Route --
MR. BRYNER: Route 1 --
CHMN STAFFORD: B-1.
MR. BRYNER: So this is the common route right here that we're looking at right there. It's really close to the intersection with section B right there. So section B or 2-B joins up with the common route just a little bit south of where we're at. It comes off of the where we break away and go into the hills.
CHMN STAFFORD: And 2-A goes along Route 82?
MR. BRYNER: Correct.
CHMN STAFFORD: Okay.
MR. BRYNER: That is what we drove past.
MEMBER HAMWAY: Is 2B closer to the San Gabriel homes in that area?
MR. BRYNER: 2B is further from all homes.
MEMBER LITTLE: From all homes.
MR. BRYNER: Correct. Yeah, 1B would be the route that goes along the highway there. I won't say there are no homes on the other side, but there are only -- there are fewer homes on the other side.
MEMBER LITTLE: Okay.
MEMBER HAMWAY: Is this what you're talking about here?

MR. BRYNER: We're actually talking about this, yep. Section B. So you can see, you know, the existing homes in the Lake Patagonia area, so right up here on the hill and over here. I might be wrong but I thought this one was a garage, not a home.

MR. EDWARDS: It's a home.

MR. BRYNER: It's a home. Okay. Thank you. I may stand corrected. This would be another home that would be in closer proximity to the line.

CHMN STAFFORD: You're talking about this home right here?

MR. BRYNER: Correct.

CHMN STAFFORD: It's closer to 1B; right?

MR. BRYNER: That would be closer to -- well, we'll just call it Route 1. So our common route in this area. So it's probably about the same distance roughly as the other home that was near the crossing of the preferred route and State Highway 82.

CHMN STAFFORD: That one's about 600 yards?

MR. BRYNER: About 600 feet.

CHMN STAFFORD: Feet. Okay.

MR. BRYNER: I'm just guessing, you know. Based off of that and the other side, it's probably roughly the same, a couple of football fields.

Are there other questions about the area? What

we're looking at? I was thinking it might be useful if rather than just flipping around right here we just drove down Lake Patagonia Road just a little bit so you could see the area --

MEMBER PALMER: That would be great.

MR. BRYNER: -- a little and get an overview. We can go to that high point where we had a visual simulation and you can kind of take in the area a little. We don't need to stop there, but you can kind of get a better feel for the neighborhood.

MEMBER PALMER: Sounds good.

CHMN STAFFORD: All right. We'll see that on our way to stop 5, then.

MR. BRYNER: Correct.

MS. GRABEL: Clark, do you mind pointing out the existing utility structure in the area?

MR. BRYNER: I'm sure. Yeah, so you can know these are distribution lines, these are UNSE's distribution -- 13.2 kV distribution lines.

This larger wire there, that's communications down below. But throughout this whole neighborhood, this whole community, you've got overhead distribution lines running through this area. And there are distribution lines along Highway 82 as well. You know, it's not along every route. But there are a lot of overhead lines in

this area.

CHMN STAFFORD: What kind of birds are those?

MR. BRYNER: Redtail hawks. Not endangered.

MR. EDWARDS: Just by cats.

MR. BRYNER: Any other questions?

CHMN STAFFORD: No questions from members. Well, let's go off the record and get back on the bus and then head to stop 5.

(TIME NOTED: 10:25 a.m.)

(Conclusion of first stop: Stop No. 4.)

(TIME NOTED: 10:58 a.m.)

(Arrival at second stop: Stop No. 5.)

CHMN STAFFORD: Let's go on the record. We are now at what's marked as stop 5 on the tour. If you look to the south, listen.

MR. BRYNER: We're going to look to the south and the west primarily. So we're in the -- this is what we refer to as the Flux Canyon residential area.

The actual subdivision name is the Valley of Thousand Oaks, which you noticed coming in you saw all the large oak trees. That was what folks were talking about during the public comment session last night.

And so right here from this vantage point we can see both our alternative route as well as our preferred

route. So this is section C, so 1C and 2C.

I want to point out I guess first of all the preferred route and where it would go. So if you can see this mesa, we're looking more or less to the west. If you see that little red kind of knoll across the way there, that's about where our last pole would be on that mesa.

The gas line is up on that mesa, and then we jump across here and we go up, this is Flux Canyon, you can't really see it because it's blocked by this mountain right here, but it goes between this mountain and those mountains over there, and these are all part of the Patagonia Mountains.

The beautiful part of this mount is it does block it from many people's views. So you only see it a little bit and then it goes up there and it's out of the viewsheds.

Whereas the alternative section, Section 2C, it would go to roughly the same place on that red knoll, but then it would drop off the hill, and then is that, that's actually a large garage or barn right there.

That's what we saw in the photo simulation, the home that we were adjacent to is just past, just a little bit further west of that. And so our line would come across the hill roughly to the hill right -- we're

looking towards -- actually, you can kind of see, I should have my glasses on -- that looks like a Jeep or something parked over there.

MEMBER FRENCH: Yes.

MR. BRYNER: Thank you. That's about where our structure would be located, and our line would follow that dirt road down the side canyon to Flux Canyon Road that we drove up.

And if you can look, now we're looking towards the northeast, you can see that distribution line. It kind of stands out. Those galvanized steel posts right there, so that's our distribution line.

But then you may have noticed it up on the hill off to the left as we were driving up this steeper hill, that's the distribution line that we would follow and parallel over here. So our alternative begins to follow it at that point and follows it up the canyon to the southeast of us.

CHMN STAFFORD: So where's the border to the Coronado National Forest?

MR. BRYNER: It's actually really close to the edge of the dirt drive that you see right there. It's probably 50 feet to the south of that.

CHMN STAFFORD: Okay.

MEMBER PALMER: But the preferred route is up

this canyon?

MR. BRYNER: Correct.

CHMN STAFFORD: This is on the national forest land; right?

MR. BRYNER: Correct. So that doesn't ever enter private, into this community.

CHMN STAFFORD: Right.

MR. BRYNER: It would be 100 percent on federal land.

MEMBER FRENCH: What's the distance from your last structure at that knoll to this residence?

MR. BRYNER: I know the closest we are is a quarter of a mile.

MEMBER FRENCH: Okay.

MR. BRYNER: So I don't know if that -- exactly from that spot. But a quarter mile is the closest that we get on that preferred. It's a little further from there because that's not the closest spot.

Trying to think of anything else that would be interesting to point out here. I guess any questions you've got.

CHMN STAFFORD: So you say it would go into that canyon, so it would not be visible behind that mountain when it's on the way to the final leg to the line to the mine; correct?

MR. BRYNER: Correct. So we would have a structure up on the knoll up there, and it's hard to see a little bit, but there's a hill right here, and that comes down and there's kind of a lower spot where it levels out.

We'd have a structure there, that would be the last structure that would be visible and the next structure is around this corner of where this hill drops down, so from this vantage point.

CHMN STAFFORD: What's the span going in between those two structures you're talking about?

MR. BRYNER: Those structures are probably going to be typical spans. I don't know off the top of my head. I would say 7, 800 feet. The long span is from that structure up to the top where's it's a half a mile.

MEMBER DRAGO: Can you orient me, please.

MR. BRYNER: Sure.

MEMBER DRAGO: Where I'm looking.

MR. BRYNER: So we are standing right here, and this is -- I should have brought the placemat, where it would be a little bit bigger.

CHMN STAFFORD: I got it.

MR. BRYNER: But we are looking, so if we oriented this, this is the direction we are and we are looking that direction. So we're looking towards roughly

where the two alternatives, where the alternative sections begin, that would be that road, that red --

MEMBER DRAGO: Red knoll. Gotcha. Thank you.

MR. BRYNER: Yeah, okay.

CHMN STAFFORD: There you go.

MR. BRYNER: Putting it geographically correct, so this is where we're at, probably a little bit more that way, and the red knoll is that black spot, roughly. And so it's probably a little bit more like that. If we were true north.

What other questions?

MEMBER HAMWAY: Is the red knoll you're talking about, the one way up there?

MR. BRYNER: Way over there. So there's a little tree on top of it.

MEMBER HAMWAY: That's what I thought and then I looked down and saw that one and I thought --

MR. BRYNER: Kind of a gray line of rocks dropping down from it.

MEMBER HAMWAY: Okay.

MR. BRYNER: And that -- I'm fairly confident if you see kind of a green scar over that way, that's going to be the gas line. The gas line is right in that area where it cuts down this way.

MEMBER HAMWAY: Okay. Thank you.

MR. BRYNER: Other questions?

MEMBER FRENCH: For the preferred route, what access will be used for any service workers or construction and placement for the actual structures?

MR. BRYNER: Good question. So up to the point that we're following the existing gas line, we'll use the gas line access road. So that would be near the red knoll, that would be the last point that we could access from that road.

For over here, we would come off of this dirt road that we're seeing by that -- by the barn over there, and we would cross into national forest and we would cut across, you can kind of see it's more level, that's sort of a terrace that follows this hill to the south of us, around over to that last structure.

And so we would use that, we would construct an access road right there over to that structure, so that we'd have access both for construction as well as inspection and maintenance.

MEMBER FRENCH: This dirt road that you're pointing out, is this a private drive or a county-maintained and owned road?

MR. BRYNER: I believe it's private. I don't know a hundred percent. We would have to seek access rights. We'll have several areas that we'll have to seek

access rights for that the line won't be on because of, you saw earlier some of that hilly terrain across that, the vacant ranch land area, there's lots of areas where we'll have to come in and follow ridge lines down in order to get to those structures.

MEMBER FRENCH: Have you had conversations with these property owners already to have that access already authorized?

MR. BRYNER: Not specifically about the rights-of-way. We have spoken with them about using that. And we have spoken, in fact, the resident that lives right there, they're one of the residents that took us up on the offer for a field visit, and we walked out back in there, walked the alignment that we'd like to use for a road. Spoke with them about our desire to use that road to come up and then use an access, a new access road going off of that.

MEMBER FRENCH: Have they provided any comment on the record where whether they will or will not allow access?

MR. BRYNER: They didn't say definitively one way or the other, but they were happy with the preferred route primary because that they don't like the alternative route because that would affect them more directly.

MEMBER FRENCH: Thank you.

CHMN STAFFORD: Did you say you'd have to place the poles with helicopters past this ridge, or is that a different section?

MR. BRYNER: No, that's likely what we would do for both the last structure on the lower side of the canyon and the structure on the high side of the canyon.

CHMN STAFFORD: It's a half a mile up.

MR. BRYNER: That would be so that we could minimize our footprint, because it's some rough terrain in there. And we'd prefer not to grade this massive area so that we can set up cranes and things. And so if we can set those with helicopters we can keep that footprint to a minimum.

CHMN STAFFORD: Any other questions from members?

(No response.)

CHMN STAFFORD: Do you have anything else you want to point out to us and tell us?

MR. BRYNER: I have nothing else that I'd like to share at this time, so.

CHMN STAFFORD: All right. Well, that's it for this stop. Let's go off the record and head back.

(TIME NOTED: 11:08 a.m.)

(Conclusion of second stop: Stop No. 5.)

(The tour concluded at 12:00 p.m.)

(The hearing resumed at 1:03 p.m.)

CHMN STAFFORD: Let's go back on the record.

Ms. Grabel, I believe you had some additional testimony to present.

MS. GRABEL: Yes. Thank you, Mr. Chairman.

And actually, before we launch into the remainder of our presentation, I do have some questions to address some of the public comment that we heard last night that I'd like to run through with Mr. Bryner.

CLARK BRYNER and CHRIS ORTIZ Y PINO and BRIAN LINDENLAUB, called as witnesses as a panel on behalf of the Applicant, having been previously affirmed by the Chairman to speak the truth and nothing but the truth, was examined and testified as follows:

DIRECT EXAMINATION (cont.)

BY MS. GRABEL:

Q. So, Mr. Bryner, several public commenters expressed concerns about fire safety associated with the proposed transmission line.

Is fire safety a concern with the Rio Rico to Harshaw line, and, if so, what will UNSE do to mitigate

it?

A. (Mr. Bryner) Yes, thank you. So, yeah, fire -- fire concern is always a concern or fire hazard, fire risk is always a concern of UNSE as a utility. It's something we take very seriously, and we design and inspect our lines accordingly.

On this particular project, it's not -- so it's a transmission line project. Our -- typically our real concerns for wildfires are more associated with distribution lines. Because distribution lines are located down lower to the ground, they have more of an opportunity to come into contact with vegetation, and also more of an opportunity for any sort of a failure to occur that would cause a conductor to drop to the ground and cause a wildfire.

Transmission lines, while they can have -- they can have failures, they're located higher above the vegetation. We also maintain a robust vegetation management program for our transmission lines to make sure that we maintain clearances.

And so the clearance that we maintain for a transmission line of this voltage is going to be around 18 feet. So the vegetation really doesn't have an opportunity to ever make contact with the line. In addition to that, we do a lot of inspection and then

maintenance.

So our inspection cycles for a transmission line are to view them on the ground. For a detailed inspection we pull out binoculars and inspect every single hardware component on a tower and conductor to see if anything is loosened or if it's worn, any of those things, so that we can then go and perform corrective maintenance and repair that.

Additionally, we do a helicopter inspection twice a year so that we can look for any vegetation that maybe has grown quicker than we would have expected or anything else that may have changed over time. And we've just recently started using drones so that if we suspect there's something going on, you know, from an angle that we can't see from the ground, then we can put it up in the air so that we can, you know, see if maybe a particular hardware component is wearing. We can get that view, and we can address it before something happens.

So while, yes, we are concerned about wildfire, and this is an area that does have wildfires. We feel that we've mitigated those risks based on the design of our infrastructure and our inspection and maintenance programs that we maintain.

Q. Thank you. One commenter noted the frequency of

lightning storms in this area during monsoon season. What is the likelihood that a fire will start on a transmission facility due to lightning?

A. (Mr. Bryner) So in the ten years of where I've had direct responsibility over transmission maintenance for -- for Tucson Electric Power, we've never had an incident where we've -- where we've -- where we've caused or had a wildfire initiated or any issue. Period -- well, I don't want to say any issue period -- due to lightning.

But what we have in a transmission line is we have built-in overhead lightning protection. So you've got a static wire in this case. On this line we have an OPGW, optical ground wire, so just as communications going through that -- that wire, and it's designed so that if it does get struck by lightning, that the lightning travels or the electrical charge travels through that static wire to a ground on a structure and then takes that to ground.

So I would -- I would argue that you're going to have less issues with lightning because of the line than you would otherwise where that line might strike a tree and cause a fire.

Q. Thank you. And one commenter noted that UNSE lines have already caused fires in this area.

Is that accurate?

A. (Mr. Bryner) So we learned just yesterday about -- about the incident that was discussed at -- during the public comment session near the Lake Patagonia area. And so we don't know all the details. We're trying to look into it.

Right now, as a company, we feel like if that was something that we were responsible for, that someone from the fire district that responded would have likely contacted us. So it seems odd that we didn't know about it for several weeks. So that's -- that's where we're at.

Q. Thank you. A few other public commenters expressed concern about the existing reliability of the UNSE system and referenced a recent and prolonged public outage.

Do you have any response the those concerns?

A. (Mr. Bryner) Sure. So this was an outage that occurred in February that affected Santa Cruz County and as a result of a hardware component that failed. And what we're trying to do as a company now is look for ways that we can get a secondary transmission line path to Santa Cruz County.

You can't prevent all outages where there's only one line serving the area. That's what we're working on

as a company is to see if we can provide a secondary source in order to prevent that and provide extra reliability to the County.

MEMBER LITTLE: Mr. Bryner.

MR. BRYNER: Yes.

MEMBER LITTLE: Several years ago I came down when I was working for the Commission down and toured the backup generators, the Black Star generators.

Are those no longer used?

MR. BRYNER: Thank you for the question, Member Little.

Yes, those are still used. They're still in service. We had multiple failures on that day. So the line failed, the generator that needed to be used to start the generators failed that day.

MEMBER LITTLE: Thank you.

BY MS. GRABEL:

Q. So just following up on that, what impact will this proposed line have on the reliability in this area?

A. (Mr. Bryner) So it will have essentially no impact on the reliability of the transmission system. It won't -- it won't increase reliability for transmission, but it won't decrease reliability either.

Q. Thank you. But it will have ancillary benefits that we discussed yesterday associated with the

distribution line; correct?

A. (Mr. Bryner) Correct. So on the distribution system it will provide ancillary benefits. It will provide a secondary source on the distribution system.

Q. Thanks.

One public commenter expressed concerns about the impact of this line on the property value of the area.

Do you have any comments on that?

A. (Mr. Bryner) So there is a lot of research out there about the impact of transmission lines, high voltage transmission lines on property values. It's mixed. It's essentially you can find what you're looking for.

From what I've seen and read in general, the consensus is if there is an impact to property values, that it decreases with time from when the line goes into service. It also decreases with the distance from the line to the property.

Q. Thank you.

And I'm sure you recall the comments from the owner of the Circle Z Ranches, the dude ranch, indicating that UNSE had ignored their business in proposing the Rio Rico to Harshaw line and its alternatives.

Do you have any response to those remarks?

A. (Mr. Bryner) Sure. So the conversations that -- and these conv- -- I didn't have these conversations personally. But the conversations that were had with the Circle Z Ranch were with respect to right-of-way and approaching them as a landowner to understand how they felt about the line crossing -- crossing their property and if it would be something that they would be willing to work with us on -- on securing a right-of-way for.

And that was when the Circle Z then as you heard Diana Nash -- sorry about that. Thank you -- discuss in the public comment yesterday that they approached the Arizona Land and Water Trust who has the conservation easement across their property to learn if -- if there was any -- any flexibility there.

And he -- he told about the letter that we did receive stating that, no, utility easement couldn't be granted across that property. And so essentially as a company, we took that as our answer that going across their property, well, while maybe it wouldn't be impossible, it wouldn't be easy, and it wouldn't be the path that -- you know, it's not really the way we like to operate as a company. We try to work with the landowners.

And so we chose to avoid that area. And

essentially when we were no longer working with them for a right-of-way, we treated her in the same manner we would anyone else within the study area, provided them with the newsletters and other notices so they could participate and provide comment. We never had any discussions or received any comment about the trails that she discussed or any of those other matters.

Q. Did you approach Ms. Nash after the public comment session yesterday and talk with her about ways you could work together?

A. (Mr. Bryner) I did -- did chat with her for a few minutes after the public comment last night. She was concerned that the line would impact the business, specifically the ability to do trail rides out in the area near Three-R Canyon.

And I shared with her that during long-term operations there would be no impact. There would be no reason why they couldn't ride their horses underneath the lines. And during construction when we build the structures themselves, they're, you know, 7-, 800 feet apart. They can ride in between the structures, no problem.

The only time that there might be a concern would be when we're doing the stringing of the conductors and you don't want to have anybody beneath that while you

are stringing in case something drops. And I shared with her that when we're -- when we're in conduction we should discuss those details so that we can minimize any impacts to their business to the extent possible.

Q. Thank you.

Mr. Magruder raised concerns about the potential that the Forest Service would deny our application with them for a special use permit as it pertains to the alternative routes 1C and 2C and would approve Route 2C instead of our preferred 1C route.

Have you researched how the Forest Service is likely to address the 1C versus 2C proposals?

A. (Mr. Bryner) Yes. So I know we discussed a little bit yesterday that that is a concern and that is a possibility that the Forest could select a route that wouldn't be the same route that is selected or approved in a CEC.

That said, the Forest Service is deferential to any decisions that have been made on the matter. So they would receive as part of their record the decision by this body and by the Commission, and they would take that into consideration in making their decision on which route to approve for their special use permit.

Q. And if the Committee wanted to, you know, not have us appear before them again in the case that the

Forest Service did not approve the route that this Committee approves, could the Committee approve both Route 1C and 2C now with the condition that 2C can only be constructed if the Forest Service denies the route that this Committee approves?

A. (Mr. Bryner) UNSE would not be opposed to a solution like that if that was the pleasure of the Committee to provide the flexibility or the latitude in the certificate for that.

Q. Thank you.

And finally --

MEMBER HAMWAY: May I ask a question?

MS. GRABEL: Sure. Please.

CHMN STAFFORD: Member Hamway.

MEMBER HAMWAY: Thank you, Mr. Chairman and Ms. Grabel.

Now I've lost my train of thought. I'm sorry. I said too much. Now I've lost --

MS. GRABEL: We were talking about flexibility.

MEMBER HAMWAY: It's a senior moment.

Never mind. Come back to me, and I'll ask it later. I'm sorry.

CHMN STAFFORD: Okay.

BY MS. GRABEL:

Q. So finally several commenters express an

interest in undergrounding the proposed routes. I think that our next portion of the presentation specifically addresses that.

So do you want to pull up I believe we're at Slide 74 -- 73?

A. (Mr. Bryner) 73, I believe. Yeah.

Q. Yep. And walk through why we believe that undergrounding is not a viable option in this area.

A. (Mr. Bryner) Okay. So just let me give a -- kind of a brief history of undergrounding with respect to this project. So partway through Phase 1 of the siting study, when it became apparent that we had height limitations on structures associated with the Nogales International Airport, and that would result in the elimination of really nearly all of the alternative links that we had on the table at the time, UNSE researched underground transmission to see if that was a potential solution.

Now, today, TEP and UNSE, neither company operates any underground transmission. So we're less familiar with the matter. As a result, UNSE turned to our contractor Sargent & Lundy, who does have expertise and experience with underground transmission, and we asked them to complete a feasibility study and a cost study to do underground transmission in the area that

would be affected by these height limitations. And so that was an approximately 5.37-mile stretch along in the vicinity of Highway 82 near the airport.

And that cost estimate was prepared. And the estimate came back to between 19.2 million and 35.4 million. Further, when UNSE filed our original SF299 application with the Forest Service for a special use permit, the Forest requested that UNSE investigate burying the transmission line, which was in accordance with the forest management plan, which requires utility lines to be buried when possible to protect scenic resources.

So similarly we had Sargent & Lundy study an underground transmission line in that area. The study found that due to the rocky and hilly terrain an underground line would add approximately 2 miles to the route. Further, the cost to underground the transmission line was estimated to be 10 to 12 times greater than building an overhead line, and the ground disturbance impact would more than double for the -- for an underground line.

To mitigate visual resource concerns, since that was the -- that was the concern of the Forest Service, UNSE proposed to use the self-weathering steel poles, which blend in with the natural environment. And while

it wasn't an approval of the line, as I think I mentioned yesterday, the SF99 application was accepted by the Forest Service in the state where we applied for an overhead transmission line through this area.

MEMBER MERCER: Mr. Chairman.

CHMN STAFFORD: Yes, Member Mercer.

MEMBER MERCER: Question, Mr. Bryner. You said that the ground disturbance would be more than double. What does that mean to the environment?

MR. BRYNER: So, thank you, Member Mercer.

So I don't remember what the exact impact or ground disturbance impact we estimated for the overhead line, but let's say it was 20 acres, so it would be 40 acres. It's -- that's not the correct number. I'm just throwing that out there. So it would be double that for the underground transmission line.

But if you picture a line -- so the forest -- I think we're around 7 miles on the forest, and we would expect an open trench for the underground about 30 feet wide. So if you did the math, 30 times 7 miles, it's a lot of acres.

MEMBER MERCER: Thank you.

CHMN STAFFORD: Mr. Bryner.

MR. BRYNER: Yes.

CHMN STAFFORD: Did you look at undergrounding

only portions of the line and also undergrounding the entire line, or was it just portions of it you looked at?

MR. BRYNER: Yes. Thank you, Chairman.

So in both of these cases -- so these were two independent studies. Both were looking at just sections of the line. So the first study that was done near the airport was about a five-mile stretch, and the second one was all portions of the line that were on the Forest Service property.

CHMN STAFFORD: Thank you.

MEMBER HAMWAY: Excuse me. So the numbers that you mentioned, the 10 million and the -- was it 20 million? I can't remember. Were those for the two different sections, or was that -- that wasn't for the whole line?

MR. BRYNER: Correct. No. So this -- does this thing work?

MEMBER HAMWAY: Oh. Right. Okay.

MR. BRYNER: You can see the number up there. So that was just for the stretch near the airport, that 19 to 35 million. I didn't provide the exact cost for the forest, but our typical overhead construction is 2 million per mile. And so 10 to 12 times 2 million per mile. So it's a lot more money, but I'll show here in a minute some of the distinguishing factors between those

two constructions.

So, as I -- as I mentioned, TEP and UNSE, we don't have -- we don't have underground transmission today. And so we wanted to educate ourselves about kind of the pros and cons between overhead and underground construction, and we wanted to be able to answer the questions that the public had.

So we asked our contractor Sargent & Lundy to put together kind of a compare and contrast between the two, and we shared that with the public at our last open house meeting we had on this project in January. And the board that we shared with them is illustrated on this slide as well as the next slide.

I just want to -- I don't want to read through all of these things, but I do want to point out a couple of key differences between the two lines.

So, one, is underground construction has a much greater permanent ground disturbance. I don't know if you can see the numbers written up there, but you can probably see them on your iPads. So it's 3.5 acres of ground disturbance per mile on the underground, and .7 acres of ground disturbance per mile on the overhead, and these are typical numbers.

So, secondly, no infrastructure would be visible with underground -- so that's a positive -- where poles

and wires would be visible on overhead construction. However, a scar the length of the transmission line would remain from underground construction where due to the self-weathering poles the poles will blend in with the background reducing the visual impact.

With respect to maintenance, maintenance of an underground line would need to be contracted out because UNS personnel don't have the training and equipment to complete that maintenance, whereas for overhead line maintenance we have all that training, automatic equipment, and expertise.

Further, underground transmission requires outages for inspection and maintenance. And these can be very long outages if a failure occurs, months at a time. Most inspections and repairs on an overhead line can be completed while the line is still energized.

And I think this is an important distinguishing factor in this case since the customer that we're building the line for is a 24/7 operation. So taking outages for weeks and months at a time isn't really a viable option. It doesn't meet the purpose and need for the project.

And, let's see, going on to the impact of the environment. So due to the open trench construction underground has a substantial impact on wildlife and the

environment during construction as a result of the greater disturbance area, whereas the overhead transmission line can span sensitive sites and disturbs less area.

And one thing I do want to point out that I didn't highlight under the environment, since it came up in abundance yesterday during the public comment period, was the wildfire risks. The reason why I didn't point this out in my prepared testimony is because, as you can see, under the underground, it's a low wildfire risk for underground. It's also a low wildfire risk overhead transmission, and that's as a result of all the inspection and maintenance that we do as preventive measures to mitigate any of those potential hazards.

So we already discussed the cost. We know that underground lines are much more expensive than overhead lines.

And there are a number of engineering, construction, and operational challenges with an underground line, but one of the most pertinent distinctions for this project is the mountainous and rocky terrain that you-all witnessed today when we went out there and the difficulty that these conditions create for underground design and construction, where an overhead line can easily be installed in difficult

terrain without substantial impact to the environment.

Now, because several alternative line routes were identified that would not be restricted by FAA height limitations, and by all measures the Forest Service seems to have indicated that an underground transmission line across the forest was not feasible in this case. So there was no compelling reason to construct and operate an underground transmission line in this area. And it's the opinion of UNSE that an overhead transmission line would result in fewer short-term and long-term impacts to both the environment as well as our system operations than an underground transmission line.

And the rationale provided by the Forest to investigate the feasibility of an underground transmission line, that was to protect scenic resources. And, in general, that was the same reason that we saw in public comments requesting an underground transmission line.

And through the use of terrain for screening and through the use of our design of the poles using the self-weathering steel, the nonreflective conductor, we feel most of the visual concerns as a result of the project are mitigated. I think you've seen that on the virtual tour. You may have been able to visualize that when we went out on the physical tour today. You'll see

that a little bit further when I share a lot of photo simulations here in a few minutes.

But we also heard about the wildfire risks as a reason to put it underground. We heard that last night. And where the benefits of an underground line would help to mitigate that, but we do feel that we have addressed any concerns with respect to the risks of an overhead transmission line to wildfire, both as a result of the height, the design of the lines, and our robust inspection and maintenance program around those lines.

BY MS. GRABEL:

Q. Thank you. Please continue.

A. (Mr. Bryner) There we go.

Q. So I think the next portion of our presentation we are going to walk through the various factors that the Committee considers in issuing a CEC. I won't go through them because I know you're all very familiar with them.

But in this case now we'll have Mr. Bryner, Mr. Ortiz y Pino and Mr. Lindenlaub address each of these in turn. So I think, Mr. Bryner, you're up first, or is it -- no, Mr. Ortiz y Pino because it's land.

A. (Mr. Ortiz y Pino) So I'd like to take this opportunity to discuss the local and the federal line use policies that affect the area.

In order to understand the land use regulations

that would pertain to the project, we reviewed local land use plans to determine which plans the project would intersect and to the extent each plan would -- the construction would be affected by those plans.

The Santa Cruz County comprehensive plan -- uh-oh. Can we jump to -- we're going to make people dizzy here. There we go. Sorry about that.

So the Santa Cruz County comprehensive plan was voted on and approved by county residents in 2016. This is the guiding plan for the county. The plan maps out character area goals based on land use patterns and designs appropriate to different areas of the county.

The goals called for development to work in concert with the environment, open space, land use, and growth area policies for unincorporated Santa Cruz County.

The project traverses the central Santa Cruz County or greater Rio Rico area -- this is this area around here, the greater Rio Rico area -- and the south central Santa Cruz County character area, which goes from Nogales, spans northeast along the SR 82 corridor and all the way up into the town of Patagonia region.

Common policy goals to the character areas in these -- for these character areas calls for the implementation of new infrastructure to be thoughtful and

designed in such a way as so to avoid the effects on wildlife, visual quality of the area, natural areas, existing developments and public health.

In accordance with the plan and character area goals and policies, the preferred route follows existing utility corridors where feasible, is buffered from residential land uses, and attempts to preserve the natural and visual landscape to the extent possible.

The plan does not include guidelines or prohibitions on the construction of transmission lines.

The Santa Cruz County zoning and development code utilizes suburban and rural land use intensities and densities to organize development throughout the county. In the greater Rio Rico area, more dense land uses are present. In this corridor you'll find warehouse and employment districts. This is a mixed-use zone. Other districts are commercial and industrial zones.

As you move to the east, you'll find more suburban character in low density and medium density residential uses. This tan color here is the general rural zone. As you can see it basically follows the path of Santa Cruz River here.

And so that's the -- rounds out the greater Rio Rico area.

The south central district, as you can see, is

comprised almost completely of the ranch and general rural suburban ranch zones. And this is what we kind of went through today during our tour. Again, defined by rural ranching and low density residential uses.

There is, however, industrial zoning surrounding the Nogales International Airport, and this zoning kind of goes south past the study area, and it's outside of that clipped region there but is relegated to that area south.

So the project is located entirely within the general rural zoning district and within the zoning district public utility system's substations, switchyards transmission lines, are all permissible uses.

The project is also generally compatible with both the comprehensive plan and the zoning and development code.

Additionally, there's other plans such as the unified Nogales Santa Cruz County Transportation Plan which was initiated by ADOT in cooperation with the City of Nogales and Santa Cruz County. The study area for this plan is focused along the north-south corridor of I-19 and is basically the entire central portion of the County.

The transportation and plan identifies the need for a Nogales bypass route to relieve traffic from

Interstate 19 and Grand Avenue traveling towards SR 82. There are two alternatives for this proposed bypass route laid out in the plan.

The one that would affect the project is the alternative B, which calls for a new -- a new road essentially along the rough alignment of the plan here. So it would come out of Ruby Road, which is around here, come down to, again, the rough alignment through private property here and then connect into SR 82 at the Nogales International Airport.

Due to its high construction cost and right-of-way acquisition across private property this is an extremely expensive project. It is only feasible if there's growth and development in the area, which has not panned out since the inception of this plan. So it is beyond the long-term planning horizon and remains unfunded and an unlikely future scenario.

Alternative A, however, goes down South River Road at this point here at Ruby Road and comes down to where it meets with SR 82 down here, so that would be the additional alternative A. It's a much less expensive route and more feasible in the long-term.

The 2015 Nogales International Airport Master Plan sets forth an implementation plan that recommends improvements to -- based on potential future demand. The

master plan calls for a runway, an airfield improvement, basically an extension of runway 321 about 300 feet towards to the Patagonia Mountains, so extending to the northeast in this direction here.

Now, this plan has been submitted to the Federal Aviation Administration as a future -- a potential future condition, which is recognized by the FAA, and is then evaluating -- they use this to evaluate all future construction projects within their jurisdiction. So as part of that obstruction evaluation airport airspace analysis that we went through on routes -- along the Forest Service these were a future condition that was anticipated for their landing and takeoff procedures.

So at this point our project does not conflict with any plans associated with the Nogales Master Plan -- Nogales Airport Master Plan.

Moving on to federal land uses and regulation. On the Coronado National Forest we have the Land and Resource Management Plan, which was published in 2018. And this is the current guiding plan for the forest. The Coronado National Forest is organized into five ranger districts. The project traverses the Sierra Vista ranger district, which is located in southeastern Santa Cruz County and southeastern -- southwestern, I'm sorry, Cochise County, the dividing line being right here.

The forest plan establishes land use zones to manage lands that fall outside of federally designated areas such as wilderness areas and research natural areas. These areas have their own specific land use guidelines.

The four land use zones in the plan organize multiple resource management strategies into one comprehensive system. Those zones are the wild back country, developed recreation, roaded backcountry, and motorized recreation.

The management guidelines state that new utility structures and power lines are not allowed the wild backcountry and developed recreation land use zones.

The management guideline for a roaded backcountry zone allows utility lines as long as they are located within existing corridors. The entirety of the preferred route is within the roaded backcountry land use zone, and roughly follows the Kinder Morgan gas pipeline as well as the existing 13.2 UNSE distribution line along Flux Canyon.

The remaining land use zone is the motorized recreation zone, which is typically surrounded by roaded backcountry. These are areas such as over here where SR 82 passes through the forest. It's a motorized recreation or is completely surrounded here. This is

another recreation zone. These are areas designed for off-roading vehicle recreation. So these areas are also suitable for energy corridors.

Q. Mr. Ortiz y Pino, before you move on --

A. (Mr. Ortiz y Pino) Yes.

Q. -- is the Coronado National Forest Land and Resources Management Plan one of the reasons why the Duquesne Route and the Soldier Basin Route that we discussed yesterday are not feasible?

A. (Mr. Ortiz y Pino) That is correct. As you can see, this area in the green crosshatching represents wild backcountry. This is also the area directly to the west of the Hermosa project. And so the Solder Basin Route would have to go directly -- cut directly through the thick of that roaded wild backcountry zone.

In respect to the Duquesne Route, although there is a -- basically a cut through of roaded backcountry land use zone cutting through that wild backcountry, there is no utility corridor in that area. And so it does not fit with the guidelines that call for it to be following existing corridors. Thank you.

Q. Thank you.

A. (Mr. Ortiz y Pino) So additionally the Forest uses special use permits to authorize various activities on Forest Service lands. These are services to

provide -- needed to provide to communities that cannot reasonably be accommodated on nonfederal land. Authorized special uses should be the minimum necessary to accommodate the use and minimize impacts to the environment, social, and visual resources.

Relating specifically to electric utility lines, special use permit guidelines state that lines crossing the forest to access private inholdings should utilize natural topography and vegetation for screening, that new utility line requests should only be permitted within existing utility corridors. New or reconstructed utility lines should be placed underground when possible to protect scenic resources unless this is not feasible because of the overriding environmental concerns.

New electrical transmission lines and natural gas pipelines should be located in existing corridors that meet the scenic integrity objective of the forest plan.

UNSE has submitted a special use permit application, as my colleague Clark has said before. This permit application was accepted in December of 2023, and the preferred route generally follows the natural gas pipeline and the existing 13.2 kV distribution line.

The project is in compliance with the land management objective set out in the Coronado National

Forest Land and Resource Management Plan.

CHMN STAFFORD: Mr. Ortiz y Pino, I have a quick question.

MR. ORTIZ Y PINO: Yes.

CHMN STAFFORD: Does any portion of that distribution cross national forestland?

MR. ORTIZ Y PINO: Yes. The distribution line does cross through national forestland.

CHMN STAFFORD: Okay.

MR. ORTIZ Y PINO: Correct.

CHMN STAFFORD: That's what I thought you said. I just wanted to make sure that I was getting that. Thank you.

MR. ORTIZ Y PINO: Yeah.

MEMBER HAMWAY: Well, I have a quick question. Does it cross the backcountry -- does any transmission line traverse, whether it's a distribution line, does it go through the wild backcountry --

MR. ORTIZ Y PINO: No, it does not.

MEMBER HAMWAY: -- and those others are?

No. So nothing goes through there?

MR. ORTIZ Y PINO: The little cursor showed up here. So right about now the existing distribution line follows Flux Canyon Road, which stays outside of the wild backcountry. It is entirely within the roaded

backcountry zone.

MEMBER HAMWAY: Okay. Thank you.

MR. ORTIZ Y PINO: Okay. So the project is in the vicinity of the military training routes, military operations areas and special use airspaces by -- used by Fort Huachuca and the Tucson National Guard. The FAA policies define military airspaces as separate from civilian airspace and require additional review from the Department of Defense.

Capital Airspace Group, which is a consultant hired by UNSE to review these airspaces, conducted an informal notification review regarding the project and its proximity to an intersection with military operations areas, specifically the VR 263 here in green as well as the Buffalo Soldier Electronic Testing Range, which encompasses a very large portion of both Cochise County and Santa Cruz County even in Pima County.

Zooming in, we can see that more closely where we overlap. The Department of Defense Aviation and Installation Assurance Siting clearinghouse issued a written response dated on February 13 of 2023 notifying us that the project would not result in any specific impacts to the U.S. Army's mission. So we essentially received a clear -- once we received that clearance, then they released it back to the FAA.

Now the FAA's jurisdiction within the area -- so, again, this is the Nogales International Airport is right here in the center of that spotlight. The FAA jurisdiction extends from the airport about a three- to five-mile radius. And, as we said before, they require a obstruction evaluation airport airspace analysis for any new construction within that jurisdictional area.

On March 3, 2023, we received a full determination of no hazard to air navigation on all of our structures on the preferred route as well as the alternative sections proposed on the line.

So this table shows the percentage of different land uses throughout the preferred and alternative routes. The preferred common route 1 and alternative routes 1A, 2A, 1B, 2B, and 1C consist of between 95 percent and 100 percent of vacant and undeveloped land.

Alternative Route 2C comprises of the highest percentage of residential land across all alternative sections.

It's important to note that the preferred alternative here as discussed previously was the direct result of public comment received during the August through November 2023 open house meetings.

Additionally, land use impacts can be defined in

two general ways. The first is incompatibility with existing or proposed land use plans and development, and, two, restrictions on land use that would result from the construction of the project, construction and operation of the project.

As discussed here, potential effects on future land uses are generally associated with the construction of the project rather than its operation. Once construction is completed, no more land use changes are anticipated.

As demonstrated in our application and in this presentation, the project is compatible with local land use and federal land use plans.

With respect to restrictions on the land uses resulting from the right-of-way acquisitions and across private property, 54 percent of the project would be built on private land, 46 percent on Forest Service land. Of this approximately 38 percent would follow existing utility and road right-of-way corridors, thus reducing impacts on the land.

The majority of the preferred and alternative sections would be constructed across easements on private property, which is predominantly vacant and undeveloped. Land use impacts are anticipated to be minor to low depending on the alternative route selected. As

mentioned previously Route 2C would have more impact on existing residential than any other.

MR. LINDENLAUB: Now we'll talk about biological resources.

So with regard to Exhibit C and the concepts of the biological wealth, the nature conservancy has identified three broad ecotones or biomes within the analysis area. Those being the semi-desert grassland, the Madrean Evergreen Forest and Woodland and the plains grassland.

Of course, on the east end of the study area we have both the Patagonia Mountains and the Sonoita Creek watershed, and on the west side dominated, as we've discussed, by the Santa Cruz River.

The Audubon Society has identified the Patagonia Mountains as an important bird area. The project study area on the west side has the Sonoita Tumacacori Wildlife Connectivity Linkage associated with the river. And the U.S. Fish and Wildlife Service has identified critical habitat for three species in the study area. Those being the Western yellow-billed cuckoo, the Mexican spotted owl and the jaguar.

MEMBER HAMWAY: Is there just one jaguar? So there'll always be just one jaguar?

MR. LINDENLAUB: So right now as far as we know

there's only one jaguar in the U.S. That's correct. Currently I think the last sighting was in the Chiricahua Mountains.

So the table here lists the special status species that were evaluated by our biologists that had at least some potential to occur within the project area. Two of those species, the Western yellow-billed cuckoo and the Mexican spotted owl are known to occur within the study area, but, as we discussed, the spotted cats far less likely.

So with regard to effects on areas of biological wealth, it's important to understand that there were no real differentiators between the alternatives that were considered. Our biologists assessed that the project may affect but is not likely to destroy or adversely modify critical habitat for the two special status bird species.

And thus the project will have no effect on other federally listed species either under the Endangered Species Act or the Bald and Golden Eagle Protection Act due to either lack of suitable habitat for those species or implementation of environmental protection measures, which we're going to discuss on the next page, which include preconstruction surveys.

So the environmental protection measures that I outlined in the biological evaluation and in the

application include erosion control and vegetation management, fire prevention, as was discussed, protection of nesting migratory birds. Those birds that are identified under the Migratory Bird Treaty Act, which is frankly the majority of birds in this part of Arizona. Protection of bats through minimizing impacts to large tree species, and then, as discussed, preconstruction surveys for the species identified here.

On to the broader discussion of biologic resources. In the area, the elevation within the study area ranges from 3900 to 7,000 feet above mean sea level. As we've noted, it occurs with the two subwater sheds, the Sonoita Creek and Potrero Creek Santa Cruz River sub watersheds of the upper Santa Cruz watershed.

The -- as noted by my two colleagues, the project area, the study area, consists mostly of natural and undisturbed areas with some areas of development. We saw the steepness of the canyons this morning, soils as listed here. And then the Forest Service has identified four different ecological response units, which are effectively subsets of the ecotones identified by the nature conservancy identified earlier.

So, again, with regard to the effects of the project on biological resources, they'll largely be similar between the various alternatives. The -- one of

the key focuses, foci, is to minimize disturbance to native vegetation to the extent possible.

And then, as noted, impacts are going to be addressed by conducting those preconstruction surveys, coordinating the timing of the work to happen outside of breeding seasons and then compliance with all applicable statutes, ordinances and regulations.

BY MS. GRABEL:

Q. Before we move on, Mr. Lindenlaub, I'd like to ask you the question I think that Member Mercer asked Mr. Bryner, and that is, you know, in our expertise with the environment, do you believe that the undergrounding of this transmission line would have a greater impact on the environment compared to the overhead build?

A. (Mr. Lindenlaub) It would, primarily in the way as was discussed about the removal of vegetation. We're double -- doubling the removal of vegetation. And as seen possibly in the tour today but certainly in the flyover with regard to, for instance, the gas pipeline, unless reclamation is handled very proactively, it can be difficult to reestablish vegetation in certain areas of the desert, like some of the areas that we're talking about.

And so we're also talking about doubling the area that we need to be surveying for nesting bird

species prior to construction. So in that way certainly, Ms. Grabel, it would have a greater impact.

Q. Thank you.

A. (Mr. Lindenlaub) Certainly.

Q. Please continue.

A. (Mr. Bryner) So, as we witnessed during our field visit today, the majority of the area immediately around all of our route alternatives is rural. There are really no sensitive noise receptors in the vicinity such as schools or hospitals. The greatest noise impacts will be associated with the construction of the line and other project facilities. So those will be temporary and short-term in nature and really relatively minor at the edge of the right-of-way.

The only ongoing noise from the project would be from Corona discharge, a little snap crackly pop that you can hear on transmission lines, and this is a relatively lower voltage transmission line, so the noise from Corona is minimal, but will be further reduced through the design of the transmission line.

With respect to communications, we've heard the testimony of Mr. Ortiz y Pino regarding the Buffalo Soldier Electronic Testing Range and their determination that the project would not have an effect on their mission. There's also only one registered communications

tower in the vicinity of the route alternatives, and a letter was sent to the owners of that tower, but no response was received.

UNSE does not expect any communication signal interference to occur as a result of this project.

MEMBER LITTLE: Mr. Chairman.

CHMN STAFFORD: Yes, Member Little.

MEMBER LITTLE: Mr. Bryner, I'm just curious if you have any thoughts about the noise that the gentleman last night during that public comment period mentioned was disturbing him after a reconstruction of the line.

MR. BRYNER: Member Little, yeah, that is concerning to us certainly as a company. We were discussing that last night. I know working with Roberto Guevara, who is the director of the operations here, he's had folks out there several times trying to figure that out.

He's arranged a visit with him already to have somebody -- he says, "Come out at nine o'clock at night. That's when it really makes the most noise." So he's got somebody going out there at nine o'clock to go and meet him and try to understand that.

We could clearly see he was in distress. We want to help him out. If we have anything to do with it, we want to resolve it.

MEMBER LITTLE: Thank you.

MR. BRYNER: All right. With respect to recreation, there are a number of formal and less formal recreation sites in the vicinity of the proposed project. So we have the San Cayetano de Calabazas Mission, which was just north of the planned Rio Rico switchyard. There's also the Pendleton Path which is a multiuse pathway that runs north along Pendleton Road beginning roughly where our transmission line -- so it begins really in the vicinity of the Calabazas Mission just close to if our transmission line continued over to Pendleton Road and then runs north from there.

And then we also have the Calabazas Park that we saw today on our tour, and which is located immediately in the vicinity of our preferred transmission line route.

And then you have the Coronado National Forest, which is used for more passive recreation, and there are no developed recreation sites on the forest within the vicinity of our project.

The project is not expected to have any impact on the ability of the public to use any of these sites for recreation either during construction or for the long-term.

And UNSE does not propose the use of any of the project facilities for public recreation. The planned

Rio Rico switchyard would not be open to the public for safety reasons. And while UNSE is not opposed to passive recreation beneath its transmission lines, the majority of the line would be located on easements across private lands.

MEMBER HAMWAY: Mr. Chairman, I remembered my --

CHMN STAFFORD: Member Hamway.

MEMBER HAMWAY: I remember my question.

The Circle Z, their trails, are those on federal land, or are those on private land?

MR. BRYNER: Yes. Thank you, Member Hamway.

The trails that they were referring to that we would have an impact on or an alleged impact on are located on federal lands. So those are not their trails. Those would be publicly open trails.

MEMBER HAMWAY: Thank you.

CHMN STAFFORD: So my recollection is that her complaint was that they would have to look -- see the transmission lines on their way from the ranch to the trails in the national forest; correct?

MR. BRYNER: I believe that was part of her concern, yes.

CHMN STAFFORD: It would be the visual impact of the lines, not an actual impairment to use of the trails?

MR. BRYNER: I think she had a concern -- well,

based on my conversation with her post-public comment, she did have a concern about it directly impeding the ability to use the trails, but I do think that, yes, she had a concern about the visual impact, the indirect impact on lands that were on the federal lands adjacent to them.

CHMN STAFFORD: All right. But the time when it would actually interfere with their use of the trails would be during construction, particularly when you're stringing the conductor?

MR. BRYNER: That is correct. And that would be for a very short period, a couple of days.

CHMN STAFFORD: All right. Thank you.

MR. LINDENLAUB: Okay. With regard to cultural resources, our archaeologist did a records review of a large study area around the project that included a number of the alternatives. They found, as you can see, 185 inventories had been completed in that larger study area identifying 260 archaeological sites.

With regard to the proposed project, four and a half miles at the eastern end has been surveyed, and then 1.6 miles of alternative Route C.

Two listed properties, that is properties that are actually listed on the National Register of Historic Places, were within the larger study area, those being

the Calabazas and Guevavi Missions, will not be affected by the project. And only one previously recorded archaeological site is intersected by the project, and it is common to all alternatives.

That property is known as the World's Fair Mine located on Forest Service lands. Our archaeologists have recommended that it be avoided given the nature of the project and the nature of the mine. The anticipation is that the project will be able to avoid if not the entirety of the World's Fair Mine, certainly those elements that contributed to its eligibility for listing.

And then there is a current in-use historic structure that you're familiar with now, SR 82, that is crossed by the routes, and then as noted during the flyover in earlier presentations, the project will be able to span that feature.

CHMN STAFFORD: Quick question on the cultural resources. I did notice that in the exhibit there seems to be a lot of projects that have been done -- or surveys that have been done that are ten years old or more and that the Class III surveys only necessarily covered portions of the preferred route.

In the cultural resources assessment it states that a lot of the studies that were done or the surveys -- only 26 of the 62 projects have been done

since 2000, and the Class III surveys were only necessary for at least portions of the preferred route went unidentified.

MR. LINDENLAUB: I'm sorry. Could you rephrase your question.

CHMN STAFFORD: All right. Look at page 6, Exhibit E1, in the section titled, "Previous Survey Coverage Within the Study Area."

MR. LINDENLAUB: I apologize, Mr. Chairman. I'm there.

CHMN STAFFORD: Do you see where it talks about the previous survey coverage?

MR. LINDENLAUB: I do.

CHMN STAFFORD: You see the last two sentences of the paragraph?

MR. LINDENLAUB: I do.

CHMN STAFFORD: Okay. What are the Applicant's plans to conduct these Class III surveys?

MR. LINDENLAUB: So for the portions of the project that are going to occur on national forest system lands the Forest is going to require that Class III surveys be completed. And then wherever else there may be a federal implication, waters in the U.S., something like that. On private land, Class III surveys are not required.

CHMN STAFFORD: Right. So you'll be required to do Class III surveys for the entire length of the project on federal land; correct?

MR. LINDENLAUB: On federal land, correct.

CHMN STAFFORD: Okay. What kind of efforts will you be taking on the private land to -- should something be uncovered?

MR. LINDENLAUB: So Arizona state law requires that for disturbances that discover funerary objects or bodies or something like that that all work has to stop and that the state museum, SHPO be contacted and work not resume until those discoveries are adequately addressed.

CHMN STAFFORD: Right. But other than bodies and funerary objects, though.

MR. LINDENLAUB: I don't know that we've necessarily talked about what TEP is looking to do on private lands.

MR. BRYNER: Maybe I'll address that a little bit. I know one of the standard CEC conditions is that the company contact the SHPO with respect to the project and we follow their guidance.

CHMN STAFFORD: All right. So even -- is that just on federal land or is that also on private land we're talking about?

MR. BRYNER: Sorry, did you say tribal?

CHMN STAFFORD: Private.

MR. BRYNER: Oh, private. So, no, that would be with respect to the entire project.

CHMN STAFFORD: Okay. So you're building the project on private land, and then you come across an archaeological site, you would contact SHPO.

MR. BRYNER: So the way the conditions is phrased, and maybe the folks on the other side of the room can help out a little bit, but I believe it says before we begin construction that we would contact SHPO to receive their guidance on how we should deal with cultural resources for the project.

MR. ACKEN: Mr. Chairman, can I be heard on this one?

CHMN STAFFORD: Yes, Mr. Acken.

MR. ACKEN: And I'm sure Ms. Grabel may have additional thoughts.

This does come up frequently, and it's come up in a number of cases, you know, the differential treatment between what is required on federal and state land versus private land.

And it's always been my perspective that we need to be mindful of private property rights. And I have seen several instances where private landowners don't necessarily want surveys being sent to SHPO if they're

not required to do that.

And so I don't believe that the CEC conditions that we have as standard conditions require that to be done for that very reason. And I would encourage the Committee to follow the standard condition, which just says we'll comply with all applicable laws whatever they may be. And so that gives the Applicant the opportunity to consult with SHPO and the private landowners and balance all those competing factors, but I just wanted to give my perspective. I'm sure, again, the Applicant will have additional thoughts.

CHMN STAFFORD: Thank you.

MS. GRABEL: I concur with Mr. Acken. I've had the same experiences, and the condition, which in our proposal is Condition No. 7, is written so as to avoid any impact to private property for private property right interests.

CHMN STAFFORD: Thank you.

MEMBER LITTLE: Mr. Chairman.

CHMN STAFFORD: Yes, Member Little.

MEMBER LITTLE: Along those time lines I'm wondering whether the World's Fair Mine -- whether we need a condition in there that says it will be avoided if possible basically to address the things that you have up there on the screen or had up there on the screen or if

they are covered by one of the existing -- one of the conditions that we normally put in the CEC.

MS. GRABEL: I'll defer that question, I think, to Mr. Lindenlaub.

MR. LINDENLAUB: If I may, the World's Fair Mine does occur on Forest Service land, and so the Forest has an obligation under the National Historic Preservation Act to address any potential impacts.

MEMBER LITTLE: Thank you.

CHMN STAFFORD: Please continue.

MR. BRYNER: Thank you. So moving on to scenic resources, scenic areas. So there are no designated national, state, or local scenic areas within the project study area. That said, the project study area is bisected by Arizona State Route 82 we drove down today, which was formally designated as a state scenic road known as the Patagonia Sonoita scenic road.

While not formally designated scenic, there are also several areas within the project study area that are managed for their scenic integrity, including the two units of the Tumacacori National Historic Park, which were the Calabazas Mission, as well as the Guevavi Mission and also the Coronado National Forest.

UNSE has prepared a number of photo simulations of what the proposed project might look like from these

scenic areas or areas that are managed for their scenic integrity, so I want to go through each of those simulations in a little bit of detail now.

BY MS. GRABEL:

Q. So, Mr. Bryner, before doing so, some of the key observation points appear to be located quite a distance away from the line. And so I just want the Committee to understand how a KOP is chosen. So we're just not taking pictures from a mile away for our personal benefit.

A. (Mr. Bryner) Sure. So a key observation point or a KOP is chosen -- they're -- first of all, they're representative points, so they're key observation points. They're not just observation points. So the three criteria that we really look at when identifying one of those is the quality of the view. So a quality typically being more what's the designation. It's a designated scenic overlook. It's got some sort of official designation or local importance to it.

Then we look at the frequency that viewers would have that. So that's going to be typically associated with, like, highways somewhere you have a lot of viewers that view it. Maybe it's not for a long time, but it's a lot of viewers.

The third criteria that we look at is going to be the duration of those views. So that's going to be

typically associated with something like a homeowner where, you know, it's there, and they're looking at it for hours a day.

And then, again, so we look at those three criteria. And then we'll look for points that would best represent that for that area. So in some of the residential areas, we're going to look for a more prominent viewpoint. We're not trying to hide anything. We're going to try -- where's this going to be most visible, or where are we going to be closest to the line, not necessarily in somebody's backyard, but where the most people are going to see this for the longest period of time and have the best view of it.

Q. Thank you. Please continue.

A. (Mr. Bryner) Okay. So this first visual simulation is from the Mission San Cayetano de Calabazas. And this simulation is of the common route or Route 1. And there is one structure that is visible here. So kind of the pattern that I'm going to go through as I show you these visual simulations is I will show you the condition as it exists today. Then I will show you the simulated condition. And then I'll point out where the structure is at. Kind of a guessing game for you-all.

So there's the structure with the red arrow. Oh. And I forget to orient you completely because I

forget to click it. On the right screen will be where that key observation point is from. And the cone of vision here is not exact. That is generally the direction and the view that we're looking at.

I will address, Chairman Stafford, your question from yesterday here in just a minute.

CHMN STAFFORD: I think I figured it out. I think I need to rotate the vision about 45 degrees to 30 to -- 45 to 30-something degrees counterclockwise, if that makes sense.

MR. BRYNER: Yes. I looked at it this morning, the application, and I'm, like, I think that one got by us. So, yes, the cone of vision is off.

So if you're okay with that, I was going to bring up the application and show that, but --

CHMN STAFFORD: It's fine. You can explain it, I think, when you get to, I think, it's No. 23.

MR. BRYNER: Very good. Thank you.

We're coordinating things with our hand signals. All right. This second key observation point is from the other unit of the Tumacacori National Historic Park, the Guevavi Mission. And this simulation is of the common route, Route 1, and there are three structures visible. They're fairly distant on the horizon.

MEMBER HAMWAY: Can you tell us how far we're

looking from the -- do you have that information, like, that last one when you can just barely see it? Is that a mile?

MR. BRYNER: Yeah. So I'm going to go a little bit off of memory and using also this map on the right screen with that little scale bar, because I don't have all the distances in my head, but it's roughly a mile and a half to two miles.

MEMBER HAMWAY: Okay.

MR. BRYNER: So it's fairly distant from that viewpoint.

CHMN STAFFORD: But the location where you're taking the picture from No. 11, what's the significance of that?

MR. BRYNER: Oh, this is the Guevavi Mission.

CHMN STAFFORD: Okay.

MR. BRYNER: It's a unit of the Tumacacori National Historic Park.

CHMN STAFFORD: It's a historic site.

MR. BRYNER: So it's a big ruin essentially of a historic site.

CHMN STAFFORD: Okay.

MR. BRYNER: Okay. This view should be familiar from our tour today. And I think you've seen it a couple of times. So this is a view to the north along State

Route 82 at Cumero Canyon. And this simulation is of the preferred section, Section 1A, and there are two structures visible in the picture.

MEMBER LITTLE: It's a lot greener than today.

MR. BRYNER: Sorry.

MEMBER LITTLE: That's a lot greener than today.

MR. BRYNER: Oh, yeah, it's beautiful in that picture. There's a lot of really nice pictures, so hopefully you can enjoy those photos.

CHMN STAFFORD: Is that one span or is there another pole we just don't see?

MR. BRYNER: There are -- I believe there are quite a few spans in there, but some of them are obstructed by terrain.

CHMN STAFFORD: All right. Thank you.

MR. BRYNER: Yeah. So one other question for you-all. I know you had the question about the distance. Do you want me to try to estimate the distance on all of these?

MEMBER HAMWAY: No. I can -- was just mainly checking my own thought, so I'm good.

MR. BRYNER: Okay. Thank you.

This is the same view as the previous location, but this simulation is of the alternative section, Section 2A, and there's one structure visible here. The

reason why there's fewer structures visible is if you'll recall that side canyon where the structures were located down lower, so more terrain obstructing the view, which is typically a good thing to obstruct the view.

All right. This is a view to the northeast along State Route 82. And this simulation depicts the single proposed crossing of the highway by the common route or Route 1. I won't bother pointing out that structure.

MEMBER LITTLE: Mr. Chairman.

CHMN STAFFORD: Yes, Member Little.

MEMBER LITTLE: Mr. Bryner, do you know where -- last night I think we had somebody speak whose property was she said it was going to cross the road right in front of her house or whatever. I didn't see anything there. Do you know where her house is? Is it --

MR. BRYNER: I'm not 100 percent certain, but I'm assuming that that person was -- if you see straight down the road in this photo simulation, that red roof, I think that is her home, and that's the one that we've referred to as two football fields away. Hold on.

My -- my colleague is correcting me. He looked her up, and she is the home that is if you see that driveway coming off to the left, so that home is a little bit further than the home with the red roof. So it's the

other home that we pointed out in the virtual tour.

MEMBER LITTLE: Oh, okay. Thank you. That we couldn't really see the house. We just saw the road.

MR. BRYNER: Yeah, you can't see it from the side of the road.

MEMBER LITTLE: Thank you.

MR. BRYNER: Okay. Now, this is a view to the southwest along State Route 82 at the turnoff to Lake Patagonia. So that's where we took our stop labeled as stop 4 today. And the simulation is of both the common route as well as the preferred Section 1B.

And this is the same view as the previous, but now this simulation is of the common route, an alternative section, section -- whoops. I forgot to put them up -- Section 2B. The biggest difference here is if you see that last structure that's visible, it's a little bit more robust, that's a turning structure.

This is a view to the northeast along State Route 82 and the natural gas pipeline. I know we just had a very fleeting view of this today. Whoops, I went ahead too far. And the simulation is of the common route or Route 1.

This is a view to the southeast along State Route 82 and Three-R Canyon. And the simulation in this case is of both the common route as well as the preferred

section, Section 1C, and there's one structure visible, and that's pointed out right there. That is the structure at the top of Flux Canyon.

This is a view to the south along State Route 82 near the intersection with Flux Canyon Road. The simulation is of the preferred section, Section 1C, and there are four structures visible, and one thing that you may have noticed while we were out there today and I wanted to point it out in this photo, is that distribution pole to the left of the screen and that pole made of galvanized steel, and compared with the simulated transmission structures that we've simulated with self-weathering steel, we feel that this is a good example of how the self-weathering steel really blends in well at the environment.

MEMBER PALMER: Mr. Chairman.

CHMN STAFFORD: One minute.

Yes, Member Palmer.

MEMBER PALMER: A quick question. Backing up to KOP 19, there is that one red arrow pointing to a structure. When I blow this up on the iPad with my fingers, there is another structure visible in the foreground kind of down in that -- is that a -- is that a simulated structure, or is that one that's there as part of the distribution line?

MR. BRYNER: So it could be a distribution line. If we could see it in here, I can flip.

MEMBER PALMER: Yeah, it's right there.

MR. BRYNER: If it's there -- if it's there right now, then it's an existing distribution -- I can't see it from here.

MS. GRABEL: Mr. Bryner, would it refresh your memory if I pointed this out to you, earlier, and you said that the reason you can see it so visibly -- because I mistook it for one of the ones that was simulation, and the reason it's more visible is because it's the galvanized steel?

MR. BRYNER: That does refresh my memory. Thank you. So that's an existing structure.

MEMBER PALMER: Okay. Thank you.

MEMBER LITTLE: Mr. Chairman.

CHMN STAFFORD: Yes, Member Little.

MEMBER LITTLE: I'm curious, does self-weatherization mean rusting?

MR. BRYNER: Yes.

MEMBER LITTLE: Thank you.

MR. BRYNER: And the rusting, it becomes a protective coating on the poles. So we also really like it from a maintenance perspective because it's easy to maintain.

Let's see. I don't think I pointed out the arrows on this. So there were the four structures visible. Again, that leftmost structure, that's the one at the top of Flux Canyon. Those other structures are really hard to see against the backdrop.

This is the same view, but now this simulation is of the alternative section, Section 2C, and there are two structures visible.

This is a view to the northwest near Flux Canyon Road within the Coronado National Forest. So this we didn't quite go up this high. And to get this view you actually have to walk up and over a small ridge, so it's not directly visible from the road itself.

So there's the one structure, and that is that same structure that's the top at the top of Flux Canyon, the other end of that half-mile span.

This is a view to the southeast along Flux Canyon road within the Coronado National Forest, and this simulation is of the preferred route, Route 1.

So, as we've seen and described in our testimony to this point, there are number of residential areas within the proposed or the project study area that we either pass through or we pass within the vicinity of for the project.

So while these areas are not managed for scenic

integrity, they are considered those long-duration viewers, and they have a greater sensitivity to any visual impact, any changes in the visual environment around them.

So additionally UNSE -- we learned through public comment and there were a number of comments that were also given last night that a number of homes in the area, especially in the Lake Patagonia area, are used for short-term rentals for ecotourism with visitors coming to the area to enjoy both the biodiversity of the area as well as scenic views of the area. So we prepared also a number of photo simulations from these residential areas to depict those key observation points. So I'll go ahead and share those with you.

This view is to the southwest along Camino San Xavier within the Rio Rico Estates Subdivision. And the simulation is of the common route, Route 1, and there are three structures visible. This view is to the northeast along Calle Quitana within the Rio Rico Estates Subdivision, and the simulation is of the common route, Route 1, again, and there are three structures visible here.

This is a view to the east along Cerrado Sanchez. That's the road that we took as we were heading south from the switchyard. And this is within the

Estancias Rio Vista subdivision. And simulation again is of the common route. And there are 13 structures visible. Some in the more foreground moving into the background views.

CHMN STAFFORD: Can you show this one without the simulation?

MR. BRYNER: Yep. There we go.

CHMN STAFFORD: Now back to the simulation. Okay. Thank you.

MR. BRYNER: You're welcome. So this is a view to the southeast along Lado De Loma Drive. That's where we turned around today within the Lake Patagonia Ranch Subdivision. Whoops, I didn't get to show you without the arrows. Now you guys know where they're at. There will be no prize for this one.

So the simulation here is of the preferred section, Section 1B, and there are five structures visible. And this is down the road at the closest point on Lado De Loma to the alternative or the preferred route in this case.

And this is that same view, but now we're showing the alternative section, Section 2B, and there are actually nine structures visible here, but they are a little bit more distant.

CHMN STAFFORD: I have a question about the

Section 2B. That's closer to the airport, isn't it?

MR. BRYNER: I wouldn't say --

CHMN STAFFORD: Or is it -- it's 2A is the one that's closer, isn't it?

MR. BRYNER: 2A is closer to the airport, yeah.

2B, I guess, technically it's a little closer, but, yeah, not really affected.

CHMN STAFFORD: So, yeah, either 1A or 2A, neither one has an impact on the airfield at all?

MR. BRYNER: Correct. Yeah. So that was we included both of those in our application to the FAA that Mr. Ortiz y Pino testified to, and neither had any -- any -- what's the right word? Obstruction?

MR. ORTIZ Y PINO: No hazard -- no hazard to air navigation.

CHMN STAFFORD: All right.

MR. BRYNER: And one thing, you know, in addition to trying to site the line in Section 2A to minimize views or impacts to view sheds, we knew about the FAA, and we were trying to -- we knew where the hazards were likely to be at, and we were trying to more or less thread the needle.

CHMN STAFFORD: Thank you.

MR. BRYNER: Let's see. I have got to make sure. I don't remember where I was at. Did we show the

preferred from KOP 15 or the alternative section? This was the one that had the -- I don't think I did. Sorry. I'm trying to figure out which KOP I'm on.

Okay. I'm there. Sorry about that. Okay. So this is a view to the south along San Gabriel Drive. So that was the road that I pointed out at stop 4 that was just on the other side of the van. That's where it was pointed out in public comment yesterday that there was some construction going on of some new homes. So that's where this view is from, and there are four structures visible out on the horizon.

CHMN STAFFORD: Now, are the new homes under construction in front of the viewer or behind the viewer in this picture?

MR. BRYNER: I've not witnessed those new homes. So I don't know where they're under construction. It must be a fairly recent thing. And I think I breezed by. That was the alternative right there. Let me just make sure we got the preferred in this section is shown right there. So four structures as opposed to -- the alternative has five structures but more distant.

CHMN STAFFORD: But 2B is further away than 1B, correct, from this vantage point?

MR. BRYNER: Correct. So even though there are more structures they're further.

CHMN STAFFORD: Okay.

MR. BRYNER: Okay. This is a view to the south along Lake Patagonia Road within the Lake Patagonia Ranch Subdivision. This is where on our tour today we kind of slowed the vans down so you could take a look. And the simulation here is of the preferred section, Section 1B, and there are three structures visible.

And same view, but the simulation is of the alternative Section 2B, and there are actually no structures visible from this vantage point, again, because they're located further away.

This is actually my favorite photo that we have. This is a view to the southeast along the Kinder Morgan natural gas pipeline, which is adjacent to the residential area near Flux Canyon. This would have been opposite from where we stopped for Stop No. 5 to the westernmost side of that development. And the simulation is of the preferred section, Section 1C. And there are five structures visible. So that's a vantage point of Flux Canyon that you weren't able to get while we were out there.

And this the same view as the previous, but this is of the simulation -- or the simulation is of the alternative section, Section 2C.

Now, this is a view to the south along Aztec

Road within that residential area near Flux Canyon, and this simulation is of the preferred route, and there are four structures visible.

This is the same view as the previous, but now the simulation is of the alternative section, the one that goes more through the neighborhood. And I didn't really point out the structure that's closest to us because I don't know if this works. There's a structure actually right here.

Now, this is where we stopped for Stop No. 5. And so this is a view to the southwest -- sorry, was there a question?

CHMN STAFFORD: No.

MR. BRYNER: And this simulation right here is of the preferred section, Section 1C, and six structures are visible.

Same view as the previous, but now the simulation is of the alternative, section Section 2C, and there are four structures visible.

CHMN STAFFORD: Go back to 1C, that one.

MR. BRYNER: Yes.

CHMN STAFFORD: All right. It's got the angle more accurate on this one it seems.

MR. BRYNER: That was pure luck.

CHMN STAFFORD: I was really scratching my head

looking at the application. I was, like, how am I seeing something to the right of the view when the line doesn't even start until the left side? That's just the pivot was wrong.

MR. BRYNER: And that was a really good check. And thank you. And I apologize. I tried to check those with a ruler to extend it out to make sure that the structures were correct and just missed that.

CHMN STAFFORD: It looks like right in the presentation, though, because I can see the right edge of view shed up against the blue section of the line, which is where the preferred route is.

MR. BRYNER: Well, we'll take it.

CHMN STAFFORD: All right. The mystery has been solved.

MEMBER MERCER: Mr. Chairman, I have a question.

CHMN STAFFORD: Member Mercer.

MEMBER MERCER: Mr. Bryner, so this the -- where we were looking at the red knoll.

MR. BRYNER: Yes.

MEMBER MERCER: And where's the canyon? Is it to my left?

MR. BRYNER: Yeah. So that red knoll was --

MEMBER MERCER: Right there?

MR. BRYNER: -- right in that area right there.

And the canyon -- the Flux Canyon, you don't see that hill, that hill is kind of starting -- the toe of the hill is starting and then going up from there, so that's the canyon.

MEMBER MERCER: Can you show us the other --

MR. BRYNER: The other simulation for this area?

MEMBER MERCER: Yes.

MR. BRYNER: Yeah. So on this simulation the line comes here. You don't really see it dropping down in this direction. And there's actually a canyon between where that structure would drop to and where it comes up to the homes, and it would come up here, come to this side, and then drop down this canyon over to Flux Canyon -- Flux Canyon Road, sorry.

MEMBER MERCER: So on this scenario, you would have the lines closer to the neighbors?

MR. BRYNER: Correct. Alternative Section 2C would go through the neighborhood.

MEMBER MERCER: Thank you.

CHMN STAFFORD: Does the court reporter need a break.

THE COURT REPORTER: I never say no to a break.

CHMN STAFFORD: Well, we've been going for approximately 90 minutes, so let's take a 15-minute break. We're in recess.

(Recess from 2:37 p.m. to 2:54 p.m.)

CHMN STAFFORD: All right. Let's go back on the record.

Ms. Grabel, your witness can continue please.

MS. GRABEL: Yes. Thank you, Mr. Chairman.

BY MS. GRABEL:

Q. Real quickly before we leave the visual simulations, Mr. Bryner, can you please explain how they were prepared and let us know whether -- how we can determine that the sizing is accurate and reflects the actual length of the pole or height of the pole?

MR. BRYNER: Sure. Let me briefly explain kind of the technical process that we go through to develop these visual simulations. So it begins with identifying the key observation points that we've already -- we've already gone through that process.

So then you go out to the field and take a photo from that location, record that GPS, the latitude and longitude of where that photo was taken and your various angles that you -- well, I'm saying that poorly, but the direction that you're facing to take the photo.

And then back in the office, you take a 3-D model of the line, so in this case we used the preliminary engineering of the line, that same PLS-CADD model that we used in the Google Earth or the virtual

tour.

And in using a 3D modeling program you take a digital elevation model that represents the terrain in the area, and you overlay that digital model of the transmission line into that. And then using that same GPS location that you took of the photo location, in your 3D modeling software you go to that same location, find that same -- that same viewing angle that from where you took that photo, match up the skylines identically to the photo, and then bring that into a photo editing software where you can overlay the 3D imagine or the 3D modeling image with the realistic photo simulation.

And in that aspect we can see exactly how tall those structures would be in the real world, and then we take real pictures of structures that we have in the system today and overlay those in those locations. We have a whole library of these photos from different angles and different types of structures.

And then using that photo editing software add those to the photograph, and then overlay the conductors, the wires, to represent the conductors in an angle that would be -- that would follow the way those -- those conductors typically sag.

CHMN STAFFORD: I have a quick question. What are the height of the poles for this, for the simulation?

Do you -- as I understand, from the application that the poles will vary in height depending on where they are, what type of structure it is, but do you calculate that into the virtual simulation, or is it all just the same height?

MR. BRYNER: That's a good question, Mr. Chairman. The structures that we've modeled in the photo simulations represent the varied heights that are in our preliminary engineering model, which, as you've seen in our application, we've requested typical structures between 60 and 120 feet in height. The majority of our structures are nowhere near that -- that highest structure. Most of the structures are closer to the 60-foot range.

CHMN STAFFORD: Now, how tall were the distribution poles that are the same type of pole that we drove past on the tour?

MR. BRYNER: So our typical distribution standard pole is between 35 and 45 feet in height.

CHMN STAFFORD: So it's a good 20 feet taller than that typically then, 15 to 20 feet taller then?

MR. BRYNER: That is correct.

CHMN STAFFORD: All right. Thank you.

BY MS. GRABEL:

Q. Thank you, Mr. Bryner. Please continue with

your presentation.

A. (Mr. Bryner) So I know we went through a whole lot of visual simulations, and we did that not just to paint a good image in everybody's heads but also so that we could conduct a visual impact assessment for the entire project.

In the assessment -- in the assessment we looked at the existing landscape characteristics, and we looked at potential changes to the landscape because of the project. We assessed the level of viewer sensitivity to different segments of the preferred and alternative routes.

And there were three main components of the visual assessment. It included identification of the types of viewers and their sensitivity of the project in each segment of the route as well as a characterization of the impacts as either low, medium or high.

The visual impact assessment found a low to moderate impact to areas managed for their scenic integrity; so that was the Missions, State Route 82, and the Coronado National Forest.

Residential areas were found to experience a low to moderate visual impact as a result of the project, but with one exception, and that was the Flux Canyon area with respect to alternative Route 2C. In that area,

visual impacts were assessed to be high for the alternative section, as I mentioned, due to the proximity of the structures and the introduction of a new visual element in an otherwise natural open space.

MEMBER HAMWAY: So real quick, Mr. Chairman.

CHMN STAFFORD: Member Hamway.

MEMBER HAMWAY: So there's no difference from visual -- what are we calling that -- visual impact between 1B and 2B?

MR. BRYNER: That is correct.

MEMBER HAMWAY: Okay. And how about 1A and 2A?

MR. BRYNER: That is correct.

MEMBER HAMWAY: Okay.

MR. BRYNER: Maybe I could elaborate just a little bit.

MEMBER HAMWAY: Sure.

MR. BRYNER: One of the things that you look for when you're doing this, the visual impact assessment, is the existing condition. So the existing condition in some of those areas -- and it depends on the key observation point. So this is a -- you're looking at each point evaluating it individually, and then you're making a determination as a whole.

But the existing condition, as you-all saw out there today, is you do have a lot of existing

infrastructure. You have overhead distribution lines, overhead communication license. You've got many homes in the area. You have fences. You have roads. It's not necessarily a untouched landscape.

And so when you're introducing another element into that that already has vertical intrusions and things like, that it's nothing new. Your eye kind of -- it blends in. And so our assessment indicated that it wouldn't change that, you know, very much.

MEMBER HAMWAY: Thank you.

MR. BRYNER: So, in addition to the visual impact assessment, we've also built in several visual mitigation elements into the project.

So, first of all, our siting efforts. We tried to utilize -- through our siting efforts we tried to utilize existing utility corridors wherever possible. So that, again, so we went introducing a new element into the landscape. It was an existing element we were just combining with it. And where the natural landscape was already disturbed, we also looked to locate within those areas.

And, secondly, through our siting efforts we tried to use the terrain and vegetation as natural screening. And so you could see that in some of the areas where, you know, it was grasslands and you're

looking out, and there's no obstruction. But if you had trees five, ten feet in height, suddenly you couldn't see anything. So that's another way to screen. Vegetation is not the best screening method. Terrain is better because vegetation is ephemeral and can disappear.

Lastly, the proposed structures are made of the self-weathering steel. That I hope you were able to get a good flavor for how well that blends with the natural surrounding both through our field visit as well as through the photo simulations we prepared, and they would have a nonreflective finish.

This is our last prepared slide. So don't celebrate all at once.

So the project is described in our collective testimony and as requested in UNSE's application for Certificate of Environmental Compatibility balances the need for reliable affordable energy and the desire to minimize impacts on Arizona's environment and ecology.

The purpose and need for this project is to provide an existing customer, South32 Hermosa, Inc., with an increased level of service. The proposed project would meet that need. In addition, it would provide reliability benefits to other UNSE customers.

The project is environmentally compatible and creates little to no adverse impacts on environmental

factors that are considered by the Committee. As such UNSE respectfully requests that the Committee grant and that the Arizona Corporation Commission approve a Certificate of Environmental Compatibility for the preferred route presented in this application.

BY MS. GRABEL:

Q. Thank you, Mr. Bryner.

And before we conclude I do have a couple follow-up matters.

Have we received any letters of support of this project?

A. (Mr. Bryner) We have.

Q. And if you could turn to Exhibit UNSE-9.

A. (Mr. Bryner) Okay.

Q. Please describe what's contained in Exhibit UNSE-9.

A. (Mr. Bryner) We have two letters of support. One letter that came from Mayor Maldonado, the mayor of the City of Nogales, and another letter that came from the Nogales Santa Cruz County Chamber of Commerce.

Q. Thank you. And if you would also please turn to Exhibit UNSE-15.

And, as we discussed yesterday, UNSE-15 is in three parts now because of the supplemental filing that was done after the prehearing conference last week.

And we've already talked about UNSE-15B, which is the response to the members of Lake Patagonia Homeowners Association.

15A is a response to questions posed by Mr. Marshall Magruder, who we heard from last night at public comment; correct?

A. (Mr. Bryner) That is correct.

Q. And is that the second response that we provided to Mr. Magruder?

A. (Mr. Bryner) Correct.

Q. Thank you.

And was that response prepared by you or under your direction and control?

A. (Mr. Bryner) Yes.

Q. Thank you.

And then we also have an Exhibit 15C also filed as a late-filed exhibit because it was received after the prehearing conference by Commission Staff; is that correct?

A. (Mr. Bryner) I don't think I have that in front of me.

Q. It should be a standalone. It's not in the book because it was filed after we compiled the book.

A. (Mr. Bryner) I believe I found it. Is that a letter from Staff?

Q. Yes. And did Staff support the project?
A. (Mr. Bryner) Okay. I have that.
Q. Thank you.
And have you read Staff's report?
A. (Mr. Bryner) Yes, I have read it, and, yes, they do support the project.
Q. Thank you.
And I think I just have one last exhibit to talk about, and that's UNSE-14. If you could turn to that.
Is UNSE-14 the proposed form of CEC that the Applicant has filed in this matter?
A. (Mr. Bryner) Yes.
Q. Was the CEC drafted as required by the Chairman to reflect the most recent cases and the direct language from those cases?
A. (Mr. Bryner) Yes, it was.
Q. There are a couple of areas where there are red lines. Were those red lines included just to clarify some of the -- give more precise language to the requirements of the conditions?
A. (Mr. Bryner) Yes, they were.
Q. Okay. Thank you.
MS. GRABEL: And with that I think I'd like to move UNS Exhibits 1 through 16.
CHMN STAFFORD: UNSE Exhibits 1 through 16 are

admitted.

(UNSE Exhibits 1 through 16 were admitted.)

MS. GRABEL: Thank you. With that, I think my panel is open to cross-examination.

MEMBER LITTLE: Mr. Chairman.

CHMN STAFFORD: Yes, Member Little.

MEMBER LITTLE: I have a question about the letter from Staff.

CHMN STAFFORD: You're reading my mind.

MEMBER LITTLE: Sort of along also addressing concerns that somebody brought up last night at the public hearing.

I am assuming that the study that was done that was provided to Staff included an analysis of the entire UNSE system such that the addition of this mining road, which is huge, relative to the rest of UNSE system down here in Santa Cruz County, can be handled by the single transmission line that comes down from which -- what is the name of that substation -- Vail.

MR. BRYNER: Yes, Member Little, this is correct. The system impact study that was conducted was comprehensive of the system as a whole to ensure that all of the other customers in the service territory would continue to be served with reliable quality power.

MEMBER LITTLE: And was the rest of Arizona

modeled in any way in that system impact study?

Vail is a TEP substation; correct?

MR. BRYNER: Vail is a TEP substation.

I don't know the answer to that. I could find out.

MEMBER LITTLE: Thank you.

CHMN STAFFORD: Mr. Bryner, the results of the system impact study called for the addition of a 20-megavolt amperage reactive capacitor bank and a 75-MVAR static volt ampere reactive compensator. Can you tell us more about what those will do and what -- and why exactly they were needed.

MR. BRYNER: So it's essentially as a result of -- since -- if you'll recall the -- when I began my testimony yesterday outlining the way the system is set up and the long radial line that feeds Santa Cruz County. So that's because of the distance that line travels, it has high impedence.

So essentially when it gets down to the end, there are -- can be voltage issues. There's a voltage drop that happens over that period of time. If you like the analogy of water pipes, that's the easiest way to explain the way voltage works. It's kind of like pressure in a pipe. You start off in the pipeline, and you've got a lot of pressure. If it's a long pipeline,

toward the end it's going to come out as a trickle. These capacitors will add or supplement that voltage and bring it up to its original voltage level allowing us to serve the customers.

CHMN STAFFORD: So where are the substations they had to go in? There are names in here, but I'm not sure where they are on the map.

MR. BRYNER: Yeah. Can we pull up slide -- I want to say it's 20ish. All right. Very good.

So the Kantor substation, that's -- that's one substation where it would be located. So that's where the 20 MVAR capacitor banks would be added. So that's the first station in the UNSE Santa Cruz system.

And then the other station where the static VAR device or static VAR compensator, that would be located in the Harshaw substation.

CHMN STAFFORD: All right. Thank you.

MR. BRYNER: Yes.

MEMBER LITTLE: Mr. Chairman.

CHMN STAFFORD: Member Little.

MEMBER LITTLE: If I can just add that the -- it's a result of the load increase that causes that you have much more current flowing over the line which causes more reactive power losses.

MR. BRYNER: Thank you, Member Little. I know

your technical expertise is better than mine.

CHMN STAFFORD: Any other questions from members?

Otherwise, Mr. Acken, you can begin your cross-examination.

MEMBER FRENCH: Mr. Chairman.

CHMN STAFFORD: Oh, yes.

MEMBER FRENCH: Yeah. I have a couple of questions to go over from the public comment last night that I didn't hear any testimony on that I just want to have covered.

First, there was an assertion during public comment that this transmission line was overbuilt and had more capacity than was necessary.

Can any of you on the panel elaborate on that?

MR. BRYNER: So let me see if I can answer. Well, one, I can assure you it's not overbuilt, because, as we've demonstrated, South32 will be responsible for paying for this line. And as a business they don't want to pay for any more than they need to.

And, you know, I'm going to leave the answer at that.

MS. GRABEL: If I could hop in for a moment.

Member French, I think part of the public commenter's concern was sort of a mistrust of South32's

calculation of the 87 kilovolts whatever the -- I can't remember the kVs needed -- the kilovolts you think you needed. And so those questions might be best posed to the mine to demonstrate -- I'm sorry, to mining project to demonstrate why that is actually accurate for what they currently need.

MEMBER FRENCH: All right. Thank you.

MR. ACKEN: We will address that.

MEMBER FRENCH: I figured. I appreciate it, Mr. Acken.

Also, next, I'm not a NEPA expert, so if you could elaborate on -- federal applications from what I understand require multiple routes selected in the application.

What routes do you intend to file, if necessary?

MR. BRYNER: I'll provide my response, and then I'll let Mr. Lindenlaub provide his.

So NEPA, while it requires alternatives to be analyzed, it doesn't necessarily require spatial alternatives. So it doesn't require separate routes. It just requires you look at different options.

So that could be, again, a different color pole, a different -- you know, any number of variables could be different, different mitigation measures. Whatever.

But want to elaborate.

MR. LINDENLAUB: Sure. So the FS299 has been submitted -- that's effectively the application -- has been submitted with a single alignment that was put into it.

So the Forest Service is going to initiate their NEPA review. And what they start to look at -- just a little NEPA background, what they start to look at is what the impacts are to the various resources. And as they consider alternatives, and they consider the need to bring forward other alternatives, they're going to look at those that might reduce impacts to a particular resource.

You could certainly envision, and we've certainly worked on environmental assessments, for instance, that have no other action alternative. You evaluate the no alternative to establish the baseline and then a single action alternative.

At this point we don't really know what other alternatives the Forest Service is going to look at. It's not unrealistic to expect that the work that was done by Mr. Bryner and his associates is going to be considered by the Forest in their NEPA document.

Does that get to your answer?

MEMBER FRENCH: Yes. Thank you for the clarification.

MR. LINDENLAUB: Sure.

MEMBER FRENCH: Lastly, something else that was brought up multiple times was the colocation of the transmission line and the underground gas line.

And can you go over the protective measures that will be in place whenever there is a transmission line near or colocated to a gas line?

MR. BRYNER: Sure. I would say standard practice on that is to go forward and do a study following the approval of a CEC authorizing that route to identify what sort of cathodic protection might be required so that we can design that into the project.

It may be as simple as some simple design changes to the structures, the configuration. It may require something more exotic. But we would certainly conduct a study in coordination with Kinder Morgan, the owner of that line, to ensure that -- and I'm sure that that would be a stipulation actually of them to be within that area to ensure that we didn't have any negative impact on their pipeline.

And we have been in coordination -- or we have been in contact with them up to this point, and they have submitted a letter stating that they were not opposed to us colocating in that corridor. It's in the application, but I'm not positive which page it's on. It's in

Exhibit J.

MS. GRABEL: And, Mr. Bryner -- I'm sorry. Go ahead.

MEMBER FRENCH: Oh, I was just going to say thank you. That's all my questions.

MS. GRABEL: I just wanted to quickly follow up isn't it also true that Staff's standard condition for CEC covers that exact issue, which is contained as proposed Condition 17 in our CEC that we do conduct a grounding and cathodic protection study.

MR. BRYNER: That is correct.

MS. GRABEL: Thank you.

MEMBER LITTLE: Mr. Chairman.

CHMN STAFFORD: Yes, Member Little.

MEMBER LITTLE: I have one question that may or may not apply here. I notice that one of the comments in the -- that is in the application mentions the possible need for relocation of graves in an existing 1800s cemetery.

Is anybody familiar with that at all?

MR. BRYNER: So I know when I read that comment it doesn't provide a lot of context for where that's at, but there is an old cemetery -- I believe it's called the Guevavi Cemetery located off of -- it's just off of the frontage road in between -- I know this isn't great, but

just to the east of the frontage road. It's within a very industrial area. There's a bunch of produce warehouses. And I believe that that was the historic cemetery that we're talking about, but I cannot be positive.

MEMBER LITTLE: Thank you.

CHMN STAFFORD: But, in any event, you're not running the line through that cemetery, are you?

MR. BRYNER: Nowhere close to it.

CHMN STAFFORD: All right. Thank you.

MR. BRYNER: But it is in the study area, so I can see why somebody might bring it up.

MEMBER MERCER: Mr. Chairman.

CHMN STAFFORD: Yes, Member Mercer.

MEMBER MERCER: I had, like, five questions but fortunately four of them were already answered.

So the only question that I have, it was regarding a comment from the public. And it said that the public would be forced to get -- to pay for the cost, and I know that answer has been answered -- the question has been answered, but is it in writing?

Would it be in writing that Hermosa project will be paying for this project for the cost?

MR. BRYNER: Thank you, Member Mercer. Are we talking about the cost to construct the line?

MEMBER MERCER: Yes.

MR. BRYNER: I'm going to defer to South32 to answer that question if we can.

MS. GRABEL: Member Mercer, I can answer briefly.

It is in writing in the CEC application. There's also testimony in the record including from South32 in their opening statement. And, again, I'm sure that their witness will confirm as well. So I think the answer to your question is yes.

MEMBER MERCER: Thank you.

MR. ACKEN: I will second that answer.

CHMN STAFFORD: Any other questions from members?

All right. Mr. Acken, it's your turn.

MR. ACKEN: Thank you, Chairman. I have a very short cross-examination, which I'm sure everyone is grateful for.

CROSS-EXAMINATION

BY MR. ACKEN:

Q. Mr. Bryner, I wanted to follow up on another public comment that we heard last night. There was discussion about the Pendleton area residents.

And do you recall the discussion about Pendleton

area residents?

A. (Mr. Bryner) Yes, I do.

Q. And there was speculation as to why those residents hadn't expressed concern with the project.

Do you recall that discussion?

A. (Mr. Bryner) I do.

Q. And do you recall that there was speculation that, perhaps, your public outreach was inadequate.

Do you recall that?

A. (Mr. Bryner) I do recall that.

Q. What is your perspective on that claim that is reason that the residents of Pendleton Road area didn't comment was due to inadequate public outreach process?

A. (Mr. Bryner) So my answer, again, can only be speculation, but we did provide -- as Mr. Ortiz y Pino testified, we provided notification to everyone within our -- our notification area, which was much larger even than our project study area, including all of the residents within the Rio Rico area along Pendleton Road.

They received newsletters. They received social media postings. I couldn't think of the generic term or that. Social media postings, newspaper advertisements. All sorts of ways to notify -- be notice -- to know that the project was going along that route.

And my speculation on why they may not have

participated and commented as much, and they did participate and comment. We did receive participation from residents in that area, and we did receive comments from residents in that area.

My speculation as to why they were not more active now would be, one, it's a different demographic that lives in that area. It's more of your working class, more of, you know, families with younger kids, different things, probably more going on in their lives.

Also, you've got existing electrical infrastructure in that area. As you noticed along Pendleton Road there's an existing distribution line already. Other things. Another speculation that I would offer is that they're located in what would be considered a little bit more of an urban environment.

And going back to the -- some of the visual analysis, you expect certain things in certain environments. So when you're in more of an urban environment, you're going to expect things like power lines, kind of comes with the territory. And so that's what I would offer.

Q. You mentioned the families in the area. Do you think another potential speculation is that the residents in that area see the value of the transmission line project and the benefits that it will provide for the

region with respect to a number of factors, including economic development?

A. (Mr. Bryner) I think that's a fair statement. When you're still working, you're going to be concerned about the economic opportunities available for you and your kids.

MR. ACKEN: Thank you. No further questions.

CHMN STAFFORD: Ms. Grabel, would you like to give a closing, or do you want to hold that until after the intervenor presents their case?

MS. GRABEL: I think I'd like to wait until after the intervenor presents. Thank you.

CHMN STAFFORD: All right. Mr. Acken, are you ready to put your witness on?

MR. ACKEN: Mr. Chairman, we are.

South32 calls Pat Risner.

And, as he gets situated and before we swear him in, I'll just set the stage. We had a short PowerPoint presentation that we will show on the left screen. This will be marked for identification as South32-1.

And so Mr. Risner will use that PowerPoint for his presentation. And on the right-hand screen we will use the UNSE map, their base map, their placeholder map, that the Committee is familiar with in this hearing.

CHMN STAFFORD: And do we have copies of this

Exhibit South32 on there?

MR. ACKEN: Is it on their tablets? I'm not sure it's on your --

MS. GRABEL: We can make copies for you, Chairman. We have a printer here. Oh, I just lied to you.

CHMN STAFFORD: Can we pop them on to the tablets here so we can just have them instantly?

MR. ACKEN: Oh, I guess the answer to that is, no, not yet.

Do you want to take a five-minute break, and we can load them up or then we'll show them up here on the screen?

CHMN STAFFORD: I prefer to have them in the possession of all the members on the tablet so they can look at the screen they choose, not the one you select necessarily.

MR. ACKEN: Okay. If we can take a quick five, ten-minute break?

CHMN STAFFORD: Yes. We're in recess.

(Recess from 3:26 p.m. to 3:37 p.m.)

CHMN STAFFORD: Let's go back on the record.

Before South32 makes its presentation I'm going to allow public comment by Diana Nash.

MS. NASH: Thank you, Chairman, for allowing me

to have a conversation again today about our property, the viewscapes that would be affected by this power line.

Something new that came to me this morning. We've been working very closely with the Arizona Office of Tourism. This past year Governor Hobbs has appointed Lisa Urias, who is very familiar with this area, to lead the department of -- the office of tourism, excuse me.

And we are going to be -- we had done some documentaries. And you can't really see, but where -- the little jog where you have to take around to go around our land, the white part up there, those are a lot of our grasslands. We ride up a lot. You know, we ride in those grasslands. We do a lot of filming in there with the beautiful mountains as a backscape.

And I did some -- I had some documentarians contact me this winter. We did some filming out there. Now, the Arizona Office of Tourism would like to come out. They would like to come out. They're going to be doing a lot of promotion for dude ranches looking for filming.

You may not know that Governor Ducey signed into law a tax incentive for the filming industry to be coming into Arizona to help with money -- so revenues would be coming into the state.

There's up to -- let's see, it says here, that

the Arizona Office of Commerce is going to be putting into effect how this is all going to work, but there is going to be 75 million in the first year, $100 million in year 2, and $125 million in year 3 following thereafter by $125 million each year in tax incentives for the film industry to be coming here to Arizona.

Also under this law the filming industry can also take place at private locations such as ranches for up to 25 million each year. This could be huge for the town of Patagonia. It could be huge for our ranch. And, like I said, the Arizona Office of Tourism just contacted us this morning wanting to bring some film crews out to see if they could get some B-roll of this area, and I would not be able to -- to use this as a space.

Those grasslands -- those jetty mountain ranges would not be part of the -- the advantageous -- the advantages for us with the film industry. And if I can tell you what's happened to Montana with the tax incentives since the filming of Yellowstone has completely taken off. Their tourism has taken off.

The filming industry brings a lot of money into the state into my hometown in Missoula. And I think it would be a very positive boon for Patagonia. But if we lose these viewscapes, if a road goes in there, we lose it, it's gone. You know, it will never be there again.

And I don't -- you know, I've ridden -- I know the gentleman did not discuss this morning about their viewscapes on that section where we ride. We ride under, above, below where the transmission line would be. Trust me, it's in the high visual point, and there are not a lot of other power lines out there.

So I just wanted to clarify that they did not do the views from that area where I take about 30 to 40 guests every week.

So thank you for allowing me to talk again. Appreciate it.

CHMN STAFFORD: Thank you.

Mr. Acken.

MR. ACKEN: Thank you, Mr. Chairman.

South32 calls Pat Risner.

CHMN STAFFORD: Mr. Risner, would you prefer an oath or affirmation?

MR. RISNER: Affirmation, please.

MR. RISNER: I do.

CHMN STAFFORD: Thank you.

//

//

//

//

PAT RISNER,

called as a witness on behalf of South32 Hermosa, Inc., having been affirmed or sworn by the Chairman to speak the truth and nothing but the truth, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. ACKEN:

Q. Good afternoon, Mr. Risner.

Please state your name and business address for the record.

A. My name is Pat Risner, R-i-s-n-e-r. Business address is 2210 East Fort Lowell Road, Tucson, Arizona.

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

A. I'm employed by South32, Hermosa, Inc., and I'm the president of the company.

Q. And take a moment to provide the Committee with some background regarding your educational and professional experience.

A. Okay. I don't have a slide, but I will take you through it. I have a bachelor's of science degree in mining engineering from Missouri University of Science and Technology.

I've been working in the mining industry

globally for a little over 30 years now.

I've been in this role as president leading the business here in Arizona and the development of Hermosa for about four years now.

Prior to that, I spent 26 years working for BHP, which is another large multinational mining company.

Roles prior to this I was the chief health safety environment officer globally for BHP, so looking after the health safety environment function for a company that had 80,000 employees in 13 countries. Prior to that I was the president of the U.S. assets based in New Mexico here in the southwest U.S.

When I was in that role, we were the sole fuel supplier to a number of regulated utilities, both here in and in New Mexico, so I have had some experience in working with hearings like this in front of the New Mexico Public Regulatory Commission.

Prior to that, mainly operational project director in health, safety, environment roles over the previous portion of my career here in the U.S. I've also worked for about 10 years overseas in Australia, Canada and Indonesia.

Q. Thank you. Now I'd like you to introduce and discuss South32 and the non-jurisdictional Hermosa project, which, of course, is of great interest in this

proceeding.

A. Okay. I'll start by sharing a little bit more about the company. So South32 Hermosa, Inc., is a U.S. corporation that is developing the Hermosa project. It's comprised of a southern Arizona-based team of major project development experts who have designed, permitted, and developed large scale mining projects of this nature in the past, including a number of local Santa Cruz County residents who do fill key roles and make up the majority of our site operational Staff.

The parent of South32 Hermosa, Inc., is South32, which is a global mining company based in Australia. We have existing operations in Australia, South America and South Africa.

Hermosa is South32's primary most advanced new development project. It's part of the company shifting its portfolio to produce more metals that are critical for a low-carbon future. So metals that are needed increasingly as we take actions to address climate change.

As part of that portfolio transformation and focusing on base metals production, South32 acquire the Hermosa project in 2018 for $1.3 billion. Since 2018, we've spent an additional $524 million in developing the project to get it to where it is today. The company has

already committed $338 million to early construction works, which are underway at site, to maintain the critical path to first production.

The Hermosa project is located on 600 acres of private lands about six to seven miles south of Patagonia, about 50 miles south of Tucson. The project is centered on the private lands, but we also hold unpatented mining claims on 40,000 acres on the Coronado National Forest around the private land base.

And that private land base that I'm referring to is -- oh, I didn't advance this one. Well, the eastern terminus of the power line where it says Harshaw is essentially the start of the private land base where the project's centered.

CHMN STAFFORD: Mr. Risner, I have a quick question.

How is it that South32 private owns a chunk of the land in the middle of the Coronado National Forest?

MR. RISNER: They're actually patented mining claims under the mining law of 1872. So they were claims where we've filed for both the subsurface mineral title and the surface rights.

So not typical private land but patented mining claims, which for all intents and purposes is private land because we own the surface and the mineral rights.

It's under the 1827 mining law.

CHMN STAFFORD: Thank you.

MR. RISNER: It's under the 1872 mining law.

CHMN STAFFORD: Okay.

MR. RISNER: The Hermosa project is unique in a number of ways. The primary aspect is it is a unique critical minerals mining project. It's the only project in the United States' advanced mining development project that would produce two critical minerals from the U.S. Department of Interior's critical minerals list.

It has an opportunity to create new domestic supply chains for critical minerals that are essential as our country takes the steps to put more electric vehicles on the road and reach bold decarbonization targets.

The two critical minerals are zinc and manganese. We are 100 percent reliant on foreign supply chains for manganese. We've not produced manganese in the United States in more than 50 years.

With the increasing demand for electric vehicles, U.S. electric battery producers are looking for domestic sources.

Zinc was added to the critical minerals list late last year because of increasing reliance on foreign supplies. We're about 87 percent reliant on foreign sources of zinc. And Hermosa holds one of the largest

undeveloped zinc resources in the world.

The manganese deposit at Hermosa is the only known manganese deposit in the United States that could produce a battery-grade manganese for supply to U.S. electric vehicle battery producers. Currently all 100 percent all battery-grade manganese in the world is produced in China.

President Biden invoked the Defense Production Act early last year, an executive order to try to simulate the production of the five battery metals, including manganese, for projects like this.

We'll also produce silver and lead as byproducts. Silver demand is primarily driven by solar. Silver coating on every solar panel and lead for batteries.

There'll be an underground mine about 4,000 feet deep with associated mineral processing and surface facilities.

The area where we're located -- and you can see on the map on your right at the eastern terminus of the power line there's a reference to trench camp. It is a historic mining area. The vast majority of the 600 acres of private land on which we're located have been mined historically as far back as the mid-1850s and '60s.

So in terms of new disturbance there's very

minimal incremental new disturbance from our operations.

You heard a number of commenters last night talking about the voluntary remediation program. The next slide is a photo of what our site looked like in the early 1960s before the historic mining ceased. Obviously, none of those structures are there today, but that processing facility produced a little more than 2 million tons of the tailings waste that was placed on the site and has been the source of surface water pollution for nearly 100 years.

That has set the table for us to start looking at this development in a new way as we take it forward.

I would say the other area where the project's going to be quite unique is our approach to sustainable development and demonstrating what next generation mining looks like in terms of sustainability.

We started with the voluntary remediation program. So we worked with the Arizona Department of Environmental Qualities Voluntary Remediation Group.

We spent $30 million, about two years, and 2.2 million work hours to move in excess of two million tons of the historic tailings from that facility you saw on the previous slide.

We saw this as an opportunity to build a new state-of-the-art facility and before we ever got into a

new mine, demonstrate what next-generation mining looked like from a sustainability standpoint.

So we've built the first new dry stack tailings facility in the U.S. Moved the two million tons of historic tailings onto that facility.

There are a lot of mining companies talking about moves to dry stack facilities. They use less water. They're safer. They reduce your surface footprint, but no one has built a new one until this operation.

We completed that project, and from our perspective it was a great opportunity to show what the future of mining looks like.

Additionally, we're designing the project to have a small surface footprint, about 95 percent less than your typical mining project that we know surface expression of the mining, no open pits, no subsidence as a result of the mining method we've chosen.

And then lastly, our company has a goal to achieve net zero operational greenhouse gas emissions by the year 2050 in line with the Paris Agreement. For us to be able to do that our new greenfield projects like Hermosa need to have a path to net zero operational emissions from day one or as early as possible. For us to achieve that at Hermosa this power line is essential.

In terms of preparing for the development, we've spent more than a decade doing environmental monitoring. We've been collecting biological data on sensitive threatened and endangered species for 12 years. It's one of the most comprehensive sets of biological data in the Coronado National Forest. And we did that in advance of our study so we could plan the project accordingly.

We've proactively completed Class III cultural resource surveys on all of our private lands, but also on more than 30,000 acres on the Coronado National Forest around us so we can understand the cultural landscape better as we're planning the project.

And then lastly we've been monitoring surface and ground water for more than five years before we moved forward.

So Mr. Acken put this time line up. I'll step through it in a bit more detail for you today. This is what the development looks like going forward.

So, as I mentioned, as part of the commitment the company's made to early construction, we do have about a $338 million construction program going on today at the site. Each step in this development -- each step in this time line also represents an increased power requirement. So every time we go to the next step there's another step change in power needs.

As part of that $338 million construction program, we will be completing construction on a new water treatment plant that will go operational in about eight weeks. That requires additional power. We essentially have utilized all of the power on the current line. We're already self-generating some power on-site with the power demand increasing as soon as we switch that new water treatment plant on.

We're also constructing a well field for ground water management, and next month we'll commence the initial excavations on the two exploration shafts to be able to access the ore body underground. We'll begin construction on two shafts that are 25 feet in diameter, 2800 feet deep, to start to explore the ore body underground that, again, will represent another increase in power demand.

In the second half of the year we'll begin construction of an exploration decline, which is sort of an incline tunnel to be able to tunnel down to access the manganese resource. So by the end of this year we'll be actively engaged in underground access development for both resources.

All of that increases power demand.

The shaft sinking decline development and operation of the ground water management infrastructure

will take us through 2024 and 2025. We will begin underground development, so actually starting to develop the underground mine, early production and surface construction.

Following that, we would move into full scale mining operations, which would go on for a number of decades.

MEMBER HAMWAY: May I ask a question?

CHMN STAFFORD: Yes, Member Hamway.

MEMBER MERCER: In the public comment last night I don't know if you were here, but they said that the water table is very high, and you're constantly pumping water to do this mine.

So can you kind of talk about that a bit? Or no?

Is that -- did I misunderstand that? I easily could have.

MR. RISNER: Yeah. So the ground water management infrastructure that I'm talking about. So we have two permits from the Arizona Department of Environmental Quality that we secured last July that governed that program. And really what it is, we have a series of wells around the ore body. The ore body is surrounded by ground water that doesn't meet Arizona surface water quality standards.

So all we're really doing is pumping that ground water away from the ore body so that we can safely begin sinking these shafts. If we don't move the water away, we have water ingress into the shafts, and it's not safe for workers.

So it's really to pump the water away from the shafts. We run it through the water treatment plant that we're building now to treat it to an Arizona surface water quality standard. And then it gets discharged into a surface water course where it re-infiltrates the environment and recharges the aquifer further down the stream. So it's really just shifting it away from the area where we'll sink the shafts.

MEMBER HAMWAY: So I'm assuming that this has been a problem since the 1800s when they were mining or no, the water?

MR. RISNER: I don't know. I don't know what the conditions were like. I assume it probably was. Yeah. We're at greater depths than they were.

MEMBER HAMWAY: Okay. Thank you.

BY MR. ACKEN:

Q. Mr. Risner, I'd like you to take a little bit deeper dive on the power demands in light of some of the public comments and then a question from Member French following up on those public comments.

A public commenter was referencing I believe it was a 2018 study for how he came up with his estimates for power demand. And I'd like you to address that as well as how you developed your power demand estimates that you provided to UNSE that formed the basis for how they determined the line size necessary.

A. So, if I recall correctly, I think the comment was that utilizing numbers from the preliminary economic assessment that's posted online in 2018 that they determined our demand should be in the 12-megawatt range, whereas we're asking for 87 megawatts.

I think the first thing to note is that 2018 preliminary economic assessment was done by the prior owner of the project. It was before South32 had purchased the project. It is a very, very different plan to what we're proposing to do now. When we acquired the project, we made it very clear that would not be our plan and that we would spend the next few years developing our own plan.

So for the last four years we spent two and a half years doing a pre-feasibility study. We took a step back along with some of the biological and cultural information that I shared and looked at the development in a different way.

So that plan did not have the manganese

development in it. It did not have -- it had a different production rate. It did not have the same ventilation and refrigeration requirements for the underground mine which are significant power demand.

It had a number of things that were very different.

So we've spent four years doing study work. First a pre-feasibility for two and a half years. And then for the last year and a half a final bankable feasibility study which is nearing completion.

As part of that, we've engineered every piece of equipment in this mine to a ready-for-construction level of engineering and definition. Every electric motor, every pump, absolutely everything.

So that is how we're able to arrive at the 87 megawatts from that detailed engineering that's been done over a four-year period since we acquired the mine to get it ready for construction.

So this is to a definition of where I could go out and source an electric motor and actually put it in place and actually develop the mine and build it.

So the 87 megawatts is built off four years of study work. It is a very different plan in a number of ways to the 2018 document that the prior owner that had published that the commenter last night had used to do

their calculations.

Q. There was a question this afternoon during the UNSE testimony, and it was a follow-up on another line of public comments regarding potential Forest Service approval for the 1C versus the alternative 2C.

You were here for that public comment; right?

A. Yes.

Q. And so the question to the UNSE witness was, Would you support a condition that in the event the Forest Service did not approve the 1C preferred alternative, that UNSE could move with the 2C alternative? What is your perspective on that potential condition?

A. Oh, yes, I did hear that discussion. I think South32 would be supportive of that if the Forest Service did not approve the proposed alternative we would be comfortable shifting to the alternative in the event that occurred.

Q. And to be very clear, you support the preferred alternative overall as proposed by UNSE; is that correct?

A. We did, but should the Forest Service not approve or that not be the selected route, we would also favor the alternative. We would be okay with that change.

Q. All right. Thank you. Do you have any

concluding comments you'd like to share with the Committee at this time?

A. I think what I'd like to say in conclusion, I think we've communicated the minute recalls that would be produced at Hermosa are really essential. The reason the Defense Production Act was invoked is U.S. Government considers the reliance on Chinese supply chains for things like manganese to be a national security risk as we increase deployment of electric vehicles.

So given that these raw materials are being produced to address climate change, we believe as a company it's essential that they be produced in a manner that's consistent with the Paris Agreement, that's climate friendly, that minimizes and eliminates greenhouse gases. We can't do that at Hermosa without this power line. It's essential. Thank you.

CHMN STAFFORD: I have a quick question for you, Mr. Risner. You said that you're self-generating at the site to supplement your power because you don't get enough from the current line that serves the mine. What type of generation are you using?

MR. RISNER: So we have a little -- I believe a little less than 2 megawatts available off the existing line given our current load and other loads. So we have a small amount of just internal combustion engine

generation that we use for current site activities.

When we switch that water treatment plant on and the well field on in June, so in about eight weeks' time, we will have to mobilize another 5 to 6 megawatts of new internal combustion engine on-site generation to be able to do that.

Later in the year, as we move -- progress the shaft sinking, there'll be another 6 to 7 megawatts. The challenge with that is we don't want to generate power with internal combustion engines and generate greenhouse gas emissions associated with that. We would prefer reliable, sustainable power, renewable power and we've had those discussions on options for renewable power supply with UniSource.

CHMN STAFFORD: So all the drilling would be electric powered then, not diesel or gas or --

MR. RISNER: So the electric power is run to pumps for the wells, and then to run, obviously, the power the water treatment plant initially, yeah.

CHMN STAFFORD: What powers the drills then?

MR. RISNER: The drills drilling the wells are diesel power, so they're internal combustion engine, yeah.

CHMN STAFFORD: So what percentage of the power you get from UniSource now is considered green or

emission free?

MR. RISNER: I don't know the answer to that. We just get grid power. So I think that they would have to have probably help us understand that. We've had discussions about options for the full load, the ultimate operation how we might be able to procure renewable power through this power line for that development, but right now we're just taking grid power off the existing line.

CHMN STAFFORD: So you would potentially acquire power from a third party through this line then.

MR. RISNER: No. We've just been discussing options with UniSource as to what they may have available to meet our needs through renewable power on the line.

CHMN STAFFORD: All right. So they would have to procure it then and then provide it to you. Okay.

All right. Thank you.

Member Hamway, do you have a question?

MEMBER HAMWAY: Yeah, I have a couple of questions. I guess I was kind of struck by the fact that you said this is the only manganese mine in the United States. Is that because that one place is the only place where manganese is, or can we expect that maybe manganese is in multiple places and some of those other mines might also wake up and start mining that? So that's one question.

And then what did this mine do before? Was it just silver? Was it zinc? Has it ever mined manganese before? So that's one question.

And then the last thing is once you mine the manganese -- this is a comment that came up last night -- what do you do with it?

How does it become suitable to be put in batteries? Do you send it to China to be manufactured and then come back?

MR. RISNER: I might start with that one if that's okay.

MEMBER HAMWAY: Okay. Sure.

MR. RISNER: I'll answer them in reverse order.

So the manganese once we mine it will go into a processing facility located here in Santa Cruz County.

MEMBER HAMWAY: Okay.

MR. RISNER: And so we do not have to send the manganese even outside Santa Cruz County.

MEMBER HAMWAY: Excellent.

MR. RISNER: Much less China.

So it's great opportunity for Santa Cruz County not just to mine the resource but to produce a final battery-grade manganese product in the county for direct sale to an electric battery manufacturer.

So we're in discussions with 10-plus entities

that have planned facilities to produce either cathode or batteries in the U.S. from manganese supply. So we would build and operate a manganese processing facility to produce the battery-grade manganese here.

In terms of what was mined historically, obviously, there hasn't been mining in the Patagonia Mountains in more than 60 years, but the historic mine on our site that you saw that produced the waste that we cleaned up in the voluntary air remediation program, they were mining lead and silver veins at a much shallower depth. So about 4- to 500-feet deep.

The zinc resource we'll mine sits between 1200 and 4,000 feet deep. The manganese resource is several hundred feet to 1200 feet deep, so much deeper depths.

In terms of the prevalence of manganese in the United States, this is a unique deposit because of its scale and quality and the ability to produce battery-grade manganese. There's some small scale deposits in Canada, particularly on the eastern side, but they're a tenth the size of this. So scale and quality, it's unique, and the fact that we're as advanced as we are. Most of these battery manufacturing facilities, you know, will be developed in the next five to ten years and this is the really the only significant resource of scale that will have the opportunity to supply those needs in

the U.S.

MEMBER HAMWAY: So how long do you think it will last? Do you have a determination of that?

MR. RISNER: Still working through that as part of the study work. It depends. There's the rate at which the battery manufacturing facilities will be built is a significant unknown, and we're still working through that with our engagement with potential customers. That will ultimately determine how long the resource will last because that will determine how fast we mine it. But it's, you know, eight to ten times the next biggest resource in Canada or others that are looking at importing manganese.

MEMBER HAMWAY: Thank you. That's all.

MEMBER GENTLES: Mr. Chair.

CHMN STAFFORD: Yes, Member Gentles.

MEMBER GENTLES: I just have one question. I'm trying to wrap my mind around how mining manganese is going to help reduce -- I may not be asking the question right.

But I'm struck by the fact that manganese can be used to produce less carbon in the ozone. Can you just explain that, how that is going to take place?

It just seems counterintuitive that you're mining more -- materials are going to go into something

that's going to make less -- have less impact on the environment.

MR. RISNER: So the electric vehicle batteries have metals in the cathode, manganese -- lithium, nickel, cobalt and manganese. So for us to produce and put an electric vehicle on the road and displace a combustion vehicle engine obviously we have to manufacture a battery.

Those batteries are all manufactured in China today, but there's many new EV battery manufacturing facilities planned and being developed in the United States now.

So the manganese we would mine at Hermosa would go into the cathode of electric vehicle batteries and enable those batteries to be manufactured in the United States, which would then enable an electric vehicle, obviously, to be put on the road and longer term displacing internal combustion engines.

With the current administration's goal we would have to put between 8 and 10 million new electric vehicles on the road. To do that you need manganese for the cathodes of the batteries.

MEMBER GENTLES: And who else is mining manganese at this point and where else in the country? And my apologies if you already answered or if the

question is little bit disjointed, but I'm trying to keep up with it.

MR. RISNER: So South32 is the largest miner of manganese in the world. We're the largest producer of manganese ore. Right now most of your production is in South Africa and in northern Australia. Most of the current manganese ore in the world comes from Gabon, Australia; South Africa, but it is also processed in China 100 percent. Whether it's for steel or for batteries it's all refined and processed in China. Thus the importance of us being able to actually take the mine to manganese and turn it into battery-grade manganese in Santa Cruz County.

MEMBER GENTLES: All right. Thank you, Mr. Chairman.

MEMBER MERCER: Mr. Chairman.

CHMN STAFFORD: Member Mercer.

MEMBER MERCER: Yes. I have a couple of questions regarding the economic development of this area.

How would this mine help in terms of jobs, pay? Nogales -- I just checked -- Nogales has a 10.7 percent unemployment. A few years ago it was 18 percent. So thing are getting better but not enough. So can you tell us about that?

MR. RISNER: Sure. So when we finished the pre-feasibility study we had Ernst & Young, one of the big four accounting firms, do an economic impact assessment on the impact the project would have socioeconomically in Santa Cruz County. It -- Santa Cruz County's per capita income is 40 percent below the sate average, and the employment is historically double the state average. The property tax intake in the entire county is only about $14 million a year, which is, obviously, to fund schools.

So the impact of the project from that study, it would increase the gross economic output in the county by between 20 and 30 percent. Just the first phase of development of the zinc resource would be equal to 20 percent of the total economy of the County. It more than doubles the property tax revenue in the County, which goes to County services and schools.

We -- in terms of total jobs, if we look at direct, so direct employees of South32, indirect, so contracting jobs created by the mine, and induced jobs, so jobs created by increased disposable income, it's nearly 1700 jobs in the County, which we would account for between 10 and 15 percent of the total payroll in the County.

So it is significant in terms of the

opportunities, the per pupil income, or the per pupil spending, per pupil funding in the schools goes up two to threefold just from the property tax increase.

MEMBER MERCER: Does Nogales have the -- I don't know if I'm going to phrase this correctly, not necessarily the brain power but the experience that you are going to need in the mine in terms of jobs?

MR. RISNER: So one of the things we've done as part of the feasibility study work is to design the workforce development, strategy, and program collaborating with local stakeholders in the County, which we will launch the middle of this year. It will be a very aggressive training program. We have a goal of more than at least 80 -- at least 80 percent of the full-time direct workforce being Santa Cruz County residents. To do that we're going to have to go through a very robust workforce development program, which will start the middle of the year.

So we do believe we can train local workforce. The mine's highly automated. Because of that we'll have about 40 percent of our employees will work at a remote operating center somewhere here on the I-19 corridor. We can train anyone to do those roles, so we do expect significant local content in the work force.

MEMBER MERCER: My last question was one of the

commenters last night was talking about good paying jobs. What does that mean exactly?

MR. RISNER: Yeah, I think the quote that was used in the comment is one -- must have gone to one of our presentations because what we -- the way we put it into context for people is the pay or the household income generated from one job at Hermosa is equivalent to about two and a half times the current household income in the County. So the current household income in the County is about 35,000, I believe, in rough terms. So these are $100,000 a year jobs or more.

MEMBER GENTLES: Forgive me, Mr. Chairman.

CHMN STAFFORD: Member Gentles.

MEMBER GENTLES: How many jobs is it going to create there in the marketplace? Maybe I'm having a problem with the audio, but I didn't quite hear that.

MR. RISNER: So it's 600 direct jobs, South32 employees, but if you add contractors and induced jobs the EY study indicated a little bit over 1600 jobs in the County.

MEMBER MERCER: Thank you.

MR. RISNER: Those numbers do not include the manganese development. That's just for the first phase with zinc. We are updating that study as we speak.

MEMBER GENTLES: All right.

MEMBER MERCER: Thank you. That was all I had.
CHMN STAFFORD: Any other questions from members?
MEMBER MERCER: Oh, one more.
CHMN STAFFORD: Yes, Member Mercer.
MEMBER MERCER: One of the public comments was something about an earthquake in the 1800s. Is that something that you're worried about?
MR. RISNER: We do have to look at that for sure, so both in the design of the underground mine, but also in the tailings storage facility we have to look at earthquake -- we have design criteria for both the underground mine design as well as the surface tailing storage facility.
Our design criterias we have to make sure that the tailings facility would withstand a one-in-10,000-year earthquake, which has never occurred. And so we do look at it through that lens. So we apply design criteria to make sure that the design of the underground mine, and particularly the tailing storage facility can withstand that.
MEMBER MERCER: Thank you.
CHMN STAFFORD: Member Hamway.
MEMBER HAMWAY: Yes. I just had one other quick question. The Inflation Reduction Act, are you receiving

subsidies from that?

MR. RISNER: We are not currently receiving subsidies from that, but there were incentives in that piece of legislation for production of critical minerals. Because we produce two, we are eligible for those incentives once we commence production.

The other thing the Inflation Reduction Act had in it was incentives for the electric vehicle manufacturers or the car companies. There was a tax credit for each vehicle if the raw materials or metals were sourced domestically, which has, again, contributed to the interest in the manganese in Hermosa.

MEMBER HAMWAY: And also the the labor, is that a piece of the Inflation Reduction Act that you use local labor, or is that your choice? It's not -- to my knowledge, that was not a condition on the IRA, but the targets on local content are very much a South32 objective.

MR. RISNER: Part of our purpose we believe when done right mining can positively impact people's lives, and so to be able to deliver on that we need to create local jobs and employ local people as part of how we develop projects.

MEMBER HAMWAY: Thank you. That's it.

CHMN STAFFORD: I believe there was a public

commenter that was concerned about this line getting built and then the mine not materializing, so basically had this transmission line to nowhere.

Can you -- what would happen -- and the other question was too is how do they know for sure that you're -- South32 is going to pay for the line and the ratepayers won't get stuck with the bill if the mine folds.

Can you explain more how your company will -- is going to take care of -- is going to handle that problem, how they're going to pay for the line, and then how that regardless what happens to the production mine it's not going to fall on the ratepayers to pay for this transmission line to a mine that's not operating.

MR. RISNER: As was stated earlier, I can confirm we are committed to paying for the line in its entirety. Even a portion of that $338 million commitment that the company's already made a portion of that were costs for the line. You know, as Mr. Bryner said in his testimony, we will pay for the line before it's built. So I can confirm that.

You know, I think the company has spent --

CHMN STAFFORD: Did you just say before it's built?

MR. RISNER: Yes.

CHMN STAFFORD: Okay. Thank you. I wanted to make sure I heard that correctly.

MR. RISNER: I think the company's commitment to the project we've invested circa $2.1 billion in the project to date and are already essentially in early construction, so I think that demonstrates the commitment and how serious we are about developing the mine.

I've talked about the criticality of the resources to the country and the push from the federal government to produce these minerals as well. So I think that -- you know, that addresses that piece in terms of our commitment and where we're at with development of the project.

CHMN STAFFORD: Thank you.

MEMBER PALMER: I do have one question.

CHMN STAFFORD: Member Palmer.

MEMBER PALMER: I'd just like your perspective on this because, as I have been listening to the federal incentives and the desire of the federal government to produce these critical minerals, and I believe they are critical, the other piece of that equation is that the Forest Service is a federal agency, and I'd like your take on the fact that I got to believe that there's going to be a desire on their part to make sure that this happens as well.

MR. RISNER: Yeah. One of the unique things I pointed out in the presentation is we're centered mostly on private land. So unlike many of the other mining development projects in the region, we can build this mine. We can sink the shafts, build the surface infrastructure access the ore body and get into production and actually produce these critical minerals all from private land without the need to do NEPA up front. That's very different to a lot of the other developments. So there is no mine plan of operations pending for the Hermosa project with the U.S. Forest Service.

MEMBER PALMER: Yeah. My thought was that the approval for the line route through the Forest Service.

MR. RISNER: Oh, right, yes. Yeah, we've not engaged with the Forest Service in terms of the critical minerals connection to the line. They are aware -- the Forest Service is very aware -- the local forest service is very aware of the particular focus on the manganese with this process as one of the five Defense Production Act metals that elevated projects like this in the federal government. So I think they're more than aware of that.

MEMBER PALMER: Yeah. Thank you.

MEMBER GENTLES: Mr. Chairman.

CHMN STAFFORD: Yes, Member Gentles.

MEMBER GENTLES: Thanks for indulging me. Something I've been thinking about in all of the hearings that we've had up to one extent to another, and I know this is outside the scope of the line siting Committee, but I am curious about it.

With a company like this one, in terms of -- and I know we're only about the line and not the actual mine itself, and so I recognize that. So I appreciate you just indulging me to maybe just for my background and context.

But what kind of corporate social responsibility plans, actions, strategies that you have -- the company may have in terms of what you're doing in each of the communities in which you're serving? And if it's outside the scope, no problem. I just -- it's just out of curiosity. Thank you, Mr. Risner.

MR. ACKEN: Mr. Chairman and Member Gentles, I would preserve that it is outside the scope, but I'm happy to have Mr. Risner address it to the extent he can. And I thank you, Mr. Gentles, for recognizing that, you know, what we are talking about is a non-jurisdictional facility, but we also recognize the Committee's interest in understanding it better.

MEMBER GENTLES: Thank you, sir.

MR. RISNER: Yeah. So I think part of that, the climate goals I referred to earlier are part of that net zero by 2050. We've got a goal to reduce our operational greenhouse gas emissions by 50 percent by 2035.

We also have set corporate targets, which do filter down to the project level, so Hermosa will have targets around biodiversity water and the like. So those corporate environmental targets do filter down to a project like this where we have project or context specific targets for what we do here.

In terms of community and social programs, so we set up the South32 Hermosa Community Fund about four years ago, which is -- and funded it, which is a fund that does quarterly or semi-annually grants to non-profits in Santa Cruz County. I think we've distributed a little over $800,000 in the last few years, particularly during COVID. That was important.

We've set up the South32 Hermosa Community Advisory panel, which is a panel of cross-sections of citizens across Santa Cruz County from each community. We meet with them monthly to listen to concerns from the community, but it's also a good sound board for us to give a preview. We've committed to give a preview before we submit permit applications. Go through community perception surveys. Things like that. Helps us keep our

finger on the pulse but also get feedback from stakeholders from across Santa Cruz County. They've been doing a lot of work on workforce development on the water, a number of other things that we're working on as part of the project.

So we're committed to continuing to invest. We've invested in infrastructure throughout the County, infrastructure projects, and as we go forward to continuing to do that.

One of the things I would like to mention, while we're not in a federal permitting process or any kind of formal consultation, we have been engaging with up to 14 different Native American tribes in and around that have historic affiliation in our area for the last four years. A lot of it was through those Class III cultural surveys, so we've been completely transparent. Every piece of data we collected on private lands we put in front of the tribes fully transparently and are looking to engage them in the same way on the data we've collected on the Coronado National Forest. So even though we're not in a formal consultation program we've been running a very formal -- informal consultant program with the tribes for the last four years as well. So there's a few examples.

MEMBER GENTLES: Thank you, Mr. Risner. Thank you, Mr. Chairman.

CHMN STAFFORD: Member Little.

MEMBER LITTLE: Mr. Risner, I'm curious how -- I look at my map on my phone. I look at the maps up here. And I don't see a road leading from your mine site out. I'm curious where it is. If you're going to have to increase the size of it to get the ore out, what your plans are with that respect. Thank you.

MR. RISNER: Okay. So if you start at the terminus of the power line you can see the gray line running back towards Patagonia that mirrors Harshaw Creek.

MEMBER LITTLE: Yes.

MR. RISNER: I don't have a pointer that's working. That's Harshaw Road. Here we go. So this is the eastern terminus of the line. This is trench camp. So that's the historic name of what is our private land. So the mine will basically be contained within the private lands here and here.

This gray line is Harshaw Road.

MEMBER LITTLE: Oh, okay.

MR. RISNER: That runs back to Patagonia and connects into the town of Patagonia where it connects to 82.

So for initial access to the mine and initial production we will continue to use Harshaw Road. We are

constructing or will soon begin construction of a bypass road on our private land that will go around the town of Patagonia so we don't have construction traffic or production-related traffic going through town. That was something we did not want to do so we're building a bypass road around town.

So we will access the site initially out Harshaw Road and then a bypass and connect with 82 on the other side of Patagonia.

MEMBER LITTLE: Thank you.

CHMN STAFFORD: And is Harshaw Road a paved road?

MR. RISNER: Parts of it are paved and parts of it are not. But we have a maintenance agreement with Santa Cruz County where we fund the maintenance of it.

CHMN STAFFORD: Okay. Do you intend to pave more that's -- than it is now as you progress and start having to move more equipment on the road?

MR. RISNER: Not initially. There are parts of that road that go through the Coronado National Forest. To do significant upgrades you would have to go through a NEPA process. We don't feel we need to do that right now, but that's why we put the maintenance agreement in place.

And then Santa Cruz County has a maintenance

agreement on those roads with the Forest Service. So through these agreements we believe the roads can be maintained appropriately.

CHMN STAFFORD: All right. Thank you.

Any other questions from members?

Bert, do you have any redirect?

MR. ACKEN: Thank you, Mr. Chairman. I have one follow-up, and it relates to a question from Member Hamway about the life of the mine.

BY MR. ACKEN:

Q. Do you recall that discussion, like, how long the mine will be in operation?

A. I do.

Q. And I believe your answer focused on the manganese development, but I'd like you to speak to the Hermosa project as a whole when you answer that question about what is the potential lifetime for this project?

A. Yeah. So both the manganese and the zinc resources are still growing every day. So we have four exploration drills running continuing to drill and explore, and we have not found the end of them yet.

So what I would say is the life of the operation continues to grow every day because we continue to grow the resource.

But this is a 30, 40, 50-year-plus venture.

This will not be something that's there for five or ten years. In some scenarios this operation could go 60-plus years. It's that vast of a resource. It's the largest undeveloped resource of zinc in the world, and, obviously, one of the largest in North America for manganese, so we're talking multiple decades.

MR. ACKEN: Thank you. Nothing further.

MEMBER GENTLES: Mr. Chairman.

CHMN STAFFORD: Member Gentles.

MEMBER GENTLES: So over that 30 to 50 years that's a significant number of jobs over that time.

Do you have any estimate on what that might look like?

MR. RISNER: Not beyond what I shared earlier from the economic impact study. I think once we add the manganese to that number, it's going to obviously go up from the 1600 I quoted before. But that -- that employment would be maintained for multiple decades the numbers I just shared.

MEMBER GENTLES: Okay. All right. Thank you, sir.

CHMN STAFFORD: Anything further for this witness?

MR. ACKEN: No. Nothing. Thank you.

MS. GRABEL: I have no cross. Thank you,

Mr. Chairman.

I did find it fascinating, though. Thank you so much for your testimony.

MEMBER HAMWAY: Thank you.

CHMN STAFFORD: Yes. Thank you. The witness is excused.

MR. RISNER: Thank you.

CHMN STAFFORD: Ms. Grabel, would you like to start your closing, or do you want to wait till the morning?

MS. GRABEL: Actually, I have a couple of things that I need to do that are sort of housekeeping related based off the last questions this Committee had for Mr. Bryner, if I may.

CHMN STAFFORD: By all means. Please do.

MS. GRABEL: Thank you.

First, Mr. Bryner, in one of your responses to a Committee member -- I believe it might have been Member French -- you referred to a letter we received from Kinder Morgan regarding the colocation of the line with their gas facilities. Do you recall that?

MR. BRYNER: Yes.

MS. GRABEL: And you said that it was a part of our CEC application; is that correct?

MR. BRYNER: I did.

MS. GRABEL: What did you discover in your research?

MR. BRYNER: I discovered that we had inadvertently omitted the letter from the application, so it is not in the application.

MS. GRABEL: Okay. Just for the Committee's edification, we have filed it right now as a late-filed exhibit, and we will be giving it to you hopefully hard copy tomorrow morning, if we can, and I'd like to move to admit it then if that's okay with you.

CHMN STAFFORD: Yes. Once I see it I'll admit.

MS. GRABEL: That's what I thought. Okay. Thank you.

And, second, in your dialogue or your colloquy rather with Member Little she asked you about the scope of the system impact study that UNSE conducted regarding the line.

Did that include the entirety of the TEP system?

MR. BRYNER: So I was able to review the system impact study we were discussing, and I was also able to consult with our transmission planning folks and found that, yes, it did include the TEP system and a full WECC study was conducted.

MEMBER LITTLE: Thank you.

MS. GRABEL: That's all I have.

MR. ACKEN: Mr. Chairman, I have one housekeeping item.

CHMN STAFFORD: Mr. Acken.

MR. ACKEN: I always forget to offer my exhibits. So I would like to offer South32-1 for admission.

CHMN STAFFORD: Yeah. South32-1 is admitted.

(Exhibit South 32-1 was admitted.)

MR. ACKEN: Thank you.

CHMN STAFFORD: Ms. Grabel, would you like to begin your closing, or would you prefer to wait until the morning?

MS. GRABEL: I can do it now or in the morning. Whatever you'd prefer, Chairman.

CHMN STAFFORD: Well, since we were here so late last evening, I'm inclined to adjourn a little -- to recess a little earlier today and come back in the morning and hopefully wrap this all up by tomorrow.

MS. GRABEL: Before lunch maybe.

CHMN STAFFORD: Well, I'm not holding my breath, but I am optimistic.

MS. GRABEL: All right. Thank you. That's fine with me.

CHMN STAFFORD: With that, we stand in recess until 9:00 a.m. tomorrow morning.

(The hearing recessed at 4:33 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, April 24, 2023.

JENNIFER HONN, RPR
Arizona Certified Reporter
No. 50885

I CERTIFY that GLENNIE REPORTING SERVICES, LLC, has complied with the ethical obligations set forth in ACJA 7-206(J)(1)

GLENNIE REPORTING SERVICES, LLC
Arizona Registered Firm
No. R1035