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BEFORE THE ARIZONA POWER PLANT
AND TRANSMISSION LINE SITING COMMITTEE

IN THE MATTER OF THE APPLICATION) DOCKET NO.
OF TUCSON ELECTRIC POWER COMPANY,) L-00000C-18-0283-00181
IN CONFORMANCE WITH THE)
REQUIREMENTS OF A.R.S § 40-360,)
et seq., FOR A CERTIFICATE OF) LS CASE NO. 181
ENVIRONMENTAL COMPATIBILITY)
AUTHORIZING THE SONORAN)
SUBSTATION TO WILMOT ENERGY)
CENTER 138 kV TRANSMISSION LINES)
AND ASSOCIATED FACILITIES)
ORIGINATING AT THE SONORAN)
SUBSTATION, SECTION 02, TOWNSHIP)
16 SOUTH, RANGE 14 EAST, AND)
TERMINATING AT THE CISNE)
SWITCHYARD, SECTIONS 14 AND 15,)
TOWNSHIP 16 SOUTH, RANGE 14 EAST,))
EACH LOCATED WITHIN PIMA COUNTY,)
ARIZONA.)
_____)

At: Tucson, Arizona
Date: September 25, 2018
Filed: October 1, 2018

REPORTER'S TRANSCRIPT OF PROCEEDINGS
VOLUME II
(Pages 149 through 290)

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1 INDEX TO EXAMINATIONS

2	WITNESSES		PAGE
3	EDMOND BECK		
4	Cross-Examination by Mr. Robertson		175
5	Cross-Examination by Mr. Schmaltz		185
6	ERIC RAATZ		
7	Direct Examination by Ms. DeCorse		187
8	Cross-Examination by Mr. Robertson		210
9	RENEE DARLING		
10	Direct Examination by Mr. Derstine		214
11	Cross-Examination by Mr. Robertson		283

12
13
14 INDEX TO ROUTE TOUR

15	STOP		PAGE
16	1		157
	2		159
17	3		161
	4		163
18	5		165

19
20 INDEX TO EXHIBITS

21	NO.	DESCRIPTION	IDENTIFIED	ADMITTED
22	TEP EXHIBITS			
23	TEP-1	Application for Certificate of Environmental Compatibility	87	187
24	TEP-2	Pima County Letter 2 August 14, 2018	115	187

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1	NO.	DESCRIPTION	IDENTIFIED	ADMITTED
2	TEP-3	Pima County Letter 3 August 23, 2018	116	187
3				
4	TEP-4	Edmond Beck Prefiled Direct Testimony	90	187
5	TEP-5	Eric Raatz Prefiled Direct Testimony	187	212
6				
7	TEP-6	Renee Darling Prefiled Direct Testimony	215	281
8	TEP-8	Proposed Route Tour Schedule and Protocol	154	187
9				
10	TEP-9	Affidavits of Publication	88	187
11	TEP-10	Proof of Posting	263	282
12	TEP-11	Proof of Service to Affected Jurisdictions	89	187
13	TEP-12	Applicant's Proposed Form of CEC	139	187
14				
15	TEP-14	Beck Hearing Presentation	90	187
16	TEP-15	Raatz Hearing Presentation	189	212
17	TEP-16	Darling Hearing Presentation	216	282
18	TEP-18	Utilities Division Staff letter to Chairman Chenal September 24, 2018	108	187
19				
20				
21	SOUTH WILMOT LAND INVESTORS EXHIBITS			
22	SW-1	Map of Verano Property	174	288
23				
24				
25				

1 BE IT REMEMBERED that the above-entitled and
2 numbered matter came on regularly to be heard before the
3 Arizona Power Plant and Transmission Line Siting
4 Committee at the DoubleTree Inn Hotel, 455 South Alvernon
5 Way, Tucson, Arizona, commencing at 9:07 a.m. on the 25th
6 day of September, 2018.

7

8 BEFORE: THOMAS K. CHENAL, Chairman

9 LAURIE WOODALL, Arizona Corporation Commission
10 LEONARD DRAGO, Department of Environmental Quality
11 JOHN RIGGINS, Arizona Department of Water Resources
12 MARY HAMWAY, Cities and Towns
13 JAMES PALMER, Agriculture
14 PATRICIA NOLAND, Public Member
15 JACK HAENICHEN, Public Member
16 RUSSELL JONES, Public Member

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1 CHMN. CHENAL: Good morning, everybody. This
2 is the time for the morning session of the TEP hearing.
3 We're going to begin the tour and take the bus on the
4 route that's been basically put into the record.

5 As we have in past cases, if we could hold the
6 questions to a minimum when we get to the various stops,
7 and I assume it's Mr. Beck that will provide some
8 commentary on what we're looking at and the importance of
9 it with respect to the application. We can take a few
10 questions, but it's difficult in the field for the court
11 reporter. So we'll have opportunity when we get back to
12 ask additional questions.

13 So does anyone have any questions or wish to
14 raise anything before we begin?

15 (No response.)

16 CHMN. CHENAL: And just as a reminder, when we
17 come back, we'll have our lunch; but the hearing won't
18 begin until 1 because we put that on the record, and it
19 would be unfair if we got back early if we did have the
20 opportunity to start before 1.

21 See if there's nothing further, let's start the
22 tour.

23 MR. BECK: If anyone wants to take a map with
24 them or the description of the tour, it's Exhibit No. 8.

25 We do have snack bags and water if you want to

1 grab one on the way out. We do -- and Old Vail Road is
2 closed because they're putting a pipeline in. So that
3 final stop will not occur, but I think we'll be able to
4 see from the south end some of the things we would have
5 seen from the north end because the property owner said
6 we could see it from his property.

7 CHMN. CHENAL: Thank you.

8 (The hearing recessed for the route tour at
9 9:09 a.m.)

10

11 (TIME NOTED: 9:15 a.m.)

12 (All Committee Members present at the hearing
13 except Member Noland, the applicant, and the intervenors
14 proceeded to the bus to begin the tour.)

15

16 MR. BECK: As a point of information, on the
17 left is the Irvington Power Plant and the Irvington
18 Substation, which a lot of you saw previously in a
19 previous case. This is the starting point for the lines
20 that will head down to the project we're developing.

21 MEMBER JONES: What's the status of those
22 reciprocating engines?

23 MR. BECK: We're waiting on the final approval
24 of the air permit. So we have the air permit, but it was
25 appealed, so they're reviewing it.

1 MEMBER JONES: I'd really like to see that in
2 operation.

3 CHMN. CHENAL: Everything has to be on the
4 record.

5 MEMBER JONES: I wasn't asking about this
6 project.

7 CHMN. CHENAL: It still has to be on the
8 record.

9 MR. BECK: So, again, just as you look out the
10 right-hand side of the bus, the triple-circuit tower is
11 the line feeding down to the Sonoran Substation or
12 ultimately will be feeding the Sonoran Substation.

13 (Off the record.)

14 MR. BECK: So just for a point of information,
15 this is not a scheduled stop.

16 CHMN. CHENAL: Let's go on the record,
17 Mr. Beck, and is this the first stop?

18 MR. BECK: This is technically not the first
19 stop; but I just wanted to point out to the left, which
20 is to the east of the bus, all of the gravel pit
21 operations. So north of Old Vail Road is all gravel pits
22 throughout the area. So that's why putting both either a
23 line or a freeway is going to be problematic to the north
24 of Old Vail Road and one of the reasons we're south of
25 Old Vail Road.

1 You can kind of see it from here, so that was
2 the only reason for pointing that out.

3

4 STOP 1

5 (TIME NOTED: 9:37 a.m.)

6 MR. BECK: Mr. Chairman, do we want to get off
7 the bus or just look from the bus?

8 CHMN. CHENAL: Let's get off for this one.

9 MR. BECK: Okay. This is what we've identified
10 as Stop No. 1 on the route tour.

11 If you look to the north, which is in that
12 direction, that's the triple-circuit tower that is coming
13 down from the is Irvington Plant to this area.

14 As you can see, on the south side of Old Vail
15 Road, which is what we're actually standing on now, the
16 one circuit on the west side turns. That's going to our
17 South Substation. You can see it goes to single-circuit
18 steel poles off in the distance there.

19 The other two circuits are on the easterly side
20 of the triple-circuit tower, and one is coming into the
21 double-circuit turning east, and the other is coming into
22 the other single-circuit structure turning east. And
23 those two lines run easterly to our existing substations,
24 Vail and Robert Bills east of us.

25 These are -- all three lines will be broken and

1 brought into the Sonoran Substation either on Alternative
2 1 or Alternative 2. Northern 1 would be right along Swan
3 Road on the east side of Swan. Northern 2 would be
4 running basically in the vicinity of where those
5 double-circuits are and go over and turn south into the
6 substation.

7 We'll point out, we do have a notice, one of
8 the notice signs right here. So if you haven't seen one
9 up and close in person, that's it.

10 MEMBER WOODALL: Mr. Beck, how visible do you
11 think that would be for the motoring public?

12 MR. BECK: Not visible. That's one of the
13 questions, how visible are they? And from our
14 perspective, at least my perspective, just a big sign
15 that said "notice" with a couple of lines below would
16 probably do the trick. But, anyway, whether they're real
17 visible or not, they're there.

18 MEMBER JONES: A big sign with a hashtag, most
19 folks would go click and pull it up.

20 CHMN. CHENAL: Any further questions?

21 (No response.)

22 CHMN. CHENAL: Thanks.

23 (TIME NOTED: 9:47 a.m.)

24 (All Committee Members present, applicant, and
25 intervenors proceeded to Stop 2.)

1 MR. BECK: So, for the record, this is not a
2 defined stop on the route tour. We're stopping to look
3 at a Pima pineapple cactus example. Once we get off the
4 bus, I won't be talking about anything other than Renee
5 can point to the Pima pineapple cactus.

6 CHMN. CHENAL: All right. Let's go off the
7 record, then.

8

9 STOP 2

10 (TIME NOTED: 9:53 a.m.)

11 MR. BECK: This is Stop No. 2. The Sonoran
12 Substation would be approximately 1,100 feet to the east
13 of us. It's kind of hard to see. There's a gravel pit
14 also in this vicinity, which I believe Ms. Darling will
15 talk about a little more this afternoon when she's giving
16 her testimony.

17 This portion of the project again would be a
18 single-circuit line in this vicinity on the east side of
19 the road. The line that we're just about under is the
20 Western Area Power line, which is the one that will be
21 modified to become the south line but in this portion
22 would be relocated to the north along Old Vail Road. But
23 this is the existing WAPA line.

24 We'll go down a little further. As we cross
25 the intersection, that's where we would cross over from

1 the east to the west with our line. We didn't have a
2 designated stop there, but you'll see it as we go by it.

3 Yes, sir.

4 CHMN. CHENAL: Mr. Beck, you just said a
5 single-circuit coming down. Wouldn't there be three
6 circuits coming down from the last stop, that
7 intersection?

8 MR. BECK: So we're at the point where we're
9 just south of the Sonoran Substation on Southern 1. So
10 this is the single-circuit.

11 CHMN. CHENAL: Down to Cisne?

12 MR. BECK: Down to Cisne, yes.

13 MEMBER DRAGO: So which was what we drove
14 alongside of? What line was this along this line?

15 MR. BECK: This one out here is a TEP
16 distribution line, this one right here that you're
17 looking at.

18 MEMBER DRAGO: No, but orient me on our map.
19 As we drove, would it be south?

20 MS. DARLING: That would be Northern 1.

21 MEMBER DRAGO: Would it be Northern 1?

22 MR. BECK: Up until a point, and then we got
23 onto Southern 1. So we're just a little bit south of the
24 Sonoran Substation.

25 MEMBER DRAGO: Okay. Thank you.

1 MR. BECK: Everybody good?

2 (No response.)

3 MR. BECK: Okay. We'll move to the next stop.

4 (TIME NOTED: 9:55 a.m.)

5 (All Committee Members present, applicant, and
6 intervenors proceeded to Stop 3.)

7

8 STOP 3

9 (TIME NOTED: 10:02 a.m.)

10 MR. BECK: This is Stop No. 3 on the -- on our
11 map. So it's as far east as we could get on a surface
12 road.

13 These residential properties here -- just
14 beyond these residential properties to the east changes
15 over to the South Wilmot land. And so our line, if we
16 were to be on Southern 2 would be just beyond the edge of
17 these properties, single-circuit.

18 MEMBER HAENICHEN: This residential section, is
19 that part of Wilmot property?

20 MR. BECK: No, I don't think so. I believe
21 these were individuals who developed the property. Our
22 Land Department would indicate wildcat development.

23 So this is about all we can see for Southern 2
24 without really bouncing across the desert.

25 Larry.

1 MR. ROBERTSON: Mr. Sharkey, who spoke during
2 public comment last night, the one individual, indicated
3 that he lived in a residential area. Is that this area
4 here?

5 MR. BECK: It's actually -- he was the
6 southeastern most property.

7 MR. ROBERTSON: So he's further south?

8 MR. BECK: Yes. It's only a couple of lots
9 down there.

10 MS. DARLING: You can see the rooftop.

11 MR. BECK: So there's like a storage shed or
12 barn. That's the edge of his property.

13 CHMN. CHENAL: Thank you.

14 MR. BECK: Any other questions?

15 CHMN. CHENAL: How far to the east would the
16 Southern 2 be located from our position?

17 MR. BECK: So if you look to the east, you can
18 see there's a fenceline, the far fenceline, of the
19 property. You can see the clearing stops. That would be
20 where the line would be, just beyond that.

21 CHMN. CHENAL: So we're talking about 200
22 yards?

23 MR. BECK: Probably, approximately that, yes.

24 MEMBER HAENICHEN: That property you were just
25 speaking of by the homeowner, what was his complaint?

1 MR. BECK: On the record, he said he would be
2 happy with Southern 1 because it isn't Southern 2 on his
3 property. So he was supportive of the company's
4 preferred option.

5 So we'll move on to No. 4.

6 (TIME NOTED: 10:04 a.m.)

7 (All Committee Members present, applicant, and
8 intervenors proceeded to Stop 4.)

9

10 STOP 4

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

12 MR. BECK: Okay. We're now at Stop No. 4. Not
13 planning to get out unless -- okay. So I think we'll
14 stay on the bus.

15 If you look to the south in front of us, a
16 quarter of a mile is where the Cisne Switchyard would be
17 located pretty much directly south. Just slightly to the
18 east, but mostly a quarter mile south of it. And then
19 beyond that is the Wilmot Energy Center properties where
20 all of the solar and battery will go on.

21 You can see to the west of us the taller
22 structures, that's TEP's 345kV lines. That's south of
23 the Wilmot properties. And we also have some lower
24 voltage lines going through this.

25 That's all, I think, we had to show you here.

1 Larry.

2 MR. ROBERTSON: The land to the west of us here
3 is part of the South Wilmot land, is that correct, as
4 part of the 700 acres?

5 MR. BECK: Yeah. The dividing line I think is
6 just south of the wash that's in front of us. So this
7 property is all South Wilmot LLC. And then south of here
8 would be where the Wilmot Energy Center property.

9 MR. ROBERTSON: Okay.

10 MR. BECK: Mr. Chairman.

11 CHMN. CHENAL: From here, where -- the location
12 of the solar plant is expected to be where?

13 MR. BECK: So the Cisne Switchyard is a quarter
14 of a mile south, and just a matter of a couple hundred
15 feet to where the start of the solar facility will be
16 developed. And it will spread over a number of acres.

17 Jack.

18 MEMBER HAENICHEN: To your knowledge, are those
19 solar collectors going to be tracking at all?

20 MR. BECK: I believe these are all fixed
21 panels.

22 CHMN. CHENAL: Number of acres for the solar
23 plant? Do you know?

24 MR. BECK: It's in the range of a couple
25 thousand, but I don't know the exact number. And they're

1 still in the design phase, so I don't know that they have
2 even finalized on that.

3 Any other questions?

4 (No response.)

5 MR. BECK: I think what we'll do is we'll head
6 back up to Old Vail Road, head east on Old Vail as far as
7 we can. It's short of the official stop that we planned
8 to do, and that will complete the tour.

9 (TIME NOTED: 10:13 a.m.)

10 (All Committee Members present, applicant, and
11 intervenors proceeded to Stop 5.)

12

13 STOP 5

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

15 MR. BECK: We're pretty much at the turning
16 point for the lines that would be coming across. So this
17 would be Northern 2. We would have two double-circuit
18 lines coming up to this point from the west from the Old
19 Vail-Swan intersection. And we would have the third
20 double-circuit that comes up would be turning east going
21 in and out on the easterly side of the two sets of
22 double-circuit towers. I'm sure I'm confusing everybody.

23 CHMN. CHENAL: But three come in and head
24 south?

25 MR. BECK: So there's two lines already coming

1 here plus the one that goes to the west. We're taking
2 the one that goes to the west, one of the ones that's
3 coming here to turn south on double-circuit structures --

4 CHMN. CHENAL: So three are coming here and
5 turning south; correct?

6 MR. BECK: I think that will be better to look
7 at on the map on the record in the meeting room because,
8 otherwise, I'm going to confuse everybody.

9 So the substation would be just to the south of
10 the berm you see to the south of us to the right. So it
11 would be just beyond the berm but back a little bit to
12 the west of the alignment we're on now.

13 So this is the north-south alignment of
14 Northern 2, and the substation is kind of midway --
15 roughly midway where we're at now and Swan Road.

16 Any questions?

17 (No response.)

18 MR. BECK: I think that completes the tour
19 portion.

20 MEMBER HAENICHEN: Great tour.

21 MR. BECK: We'll head back to the hotel.

22 (TIME NOTED: 10:21 a.m.)

23

24 MR. BECK: Since we're out here, just to be
25 very clear, this is kind of the Sonoran Corridor

1 alignment that Pima County is concerned about. This is
2 the area they would want to put a railroad in somewhere
3 adjacent to this roadway, and their hope would be that
4 the interstate would actually be along this alignment
5 just for the record.

6 (TIME NOTED: 10:24 a.m.)

7

8 MR. BECK: So just as a note of information, if
9 you look to the left, you see the TEP solar fields. So
10 as you're driving by, I thought it might be interesting
11 for you.

12 Just to the left of the bus, you can see the
13 steel going up for the new Irvington Substation that was
14 sited in our previous case as part of the RICE project.

15 (All Committee Members present, the applicant,
16 and intervenors proceeded to the hearing room, arriving
17 at 10:50 a.m.)

18 (The Committee and applicant assembled in the
19 hearing room.)

20 (TIME NOTED: 10:53 a.m.)

21 CHMN. CHENAL: Let's go back on the record just
22 for a moment. We've now completed the tour. I thought
23 it was very beneficial.

24 Are there any procedural matters we need to
25 discuss?

1 (No response.)

2 CHMN. CHENAL: If not, we'll adjourn for an
3 extended lunch break, and we'll resume the hearing at
4 1 p.m. this afternoon.

5 Anything we need to discuss?

6 (No response.)

7 CHMN. CHENAL: If not, let's adjourn, and we'll
8 see everyone back here at 1:00. Thanks very much.

9 (A recess was taken from 10:54 a.m. to
10 1:05 p.m.)

11 CHMN. CHENAL: All right. This is the time set
12 for the resumption of the hearing, the afternoon,
13 Tuesday.

14 We had a nice tour. I want to compliment TEP
15 for putting that together. It was nice. I know a number
16 of us benefited from the tour, and a number of Committee
17 members said as much to me.

18 Are there any matters we need to address before
19 the afternoon session?

20 Let me remind, if anyone knows of anyone in the
21 audience who would like -- and I don't see anybody, but
22 if someone shows up that would like to give -- is here
23 for public comment for any reason, just let me know, and
24 we'll take them out of order after a break or something.

25 When we left yesterday, I believe we were about

1 to turn it over to Mr. Robertson and then Mr. Schmaltz if
2 they had any cross-examination of Mr. Beck, and then we'd
3 turn it back for any redirect to Ms. DeCorse and then, I
4 guess, go to the other members of the panel. But that's
5 my recollection and my notes.

6 So, Mr. Robertson, do you have any questions of
7 Mr. Beck at this time?

8 MR. ROBERTSON: I do, Mr. Chairman, but I
9 understand that Ms. DeCorse was thinking about inquiring
10 of Mr. Beck if he had anything he'd like to add. So I'd
11 defer to her, and then I could proceed.

12 MS. DECORSE: And then after the tour, I didn't
13 know if there were any follow-up questions that Mr. Beck
14 would like to address. But I know a couple questions
15 were asked yesterday, and I just didn't know if Mr. Beck
16 had any follow-up answers to those questions.

17 MR. BECK: Yes, I do have a couple responses.

18 So one of the questions was regarding the width
19 of right-of-way that TEP has today along Swan Road.

20 So on the triple-circuit structures that are
21 coming down towards Old Vail Road along Swan, we have a
22 100-foot right-of-way for the triple-circuit structures.

23 The two-circuit right-of-way along Old Vail
24 Road, along the northern edge of the project, is a
25 50-foot right-of-way.

1 So I think that responds to the questions that
2 were asked regarding right-of-way yesterday.

3 CHMN. CHENAL: Any further testimony, Mr. Beck,
4 you'd like to give regarding any of the questions that
5 were asked?

6 Member Hamway has a question.

7 MEMBER HAMWAY: I just wanted to know if you
8 were going to discuss why TEP chose Northern Route 2 over
9 Northern Route 1. We haven't really talked about that,
10 have we, why one was chosen over the other? Was I
11 asleep?

12 MR. BECK: In my mind, we had, but I may not
13 have been very clear.

14 So we chose Northern 2 primarily based on the
15 interest of TAA, the Tucson Airport Authority.

16 MEMBER HAMWAY: So that was really it?

17 MR. BECK: And that was supported by -- or not
18 objected to by South Wilmot, LLC, as well as Pima County
19 in the end.

20 MEMBER HAMWAY: Both of them said they were
21 neutral on either one of them, so that's why I was asking
22 why one was chosen over the other.

23 MR. BECK: Bottom line is in the end, it was
24 because Tucson Airport Authority had a strong preference
25 for the alignment that was away from Swan. They felt

1 that the value of their frontage along Swan was greater
2 than frontage along the Old Vail Road and, therefore,
3 they wanted us to be back to the east as much as we
4 could.

5 MEMBER HAMWAY: Okay. I wasn't asleep. I just
6 kind of missed that.

7 MR. BECK: Okay.

8 And then another question that was asked was
9 regarding the cost of the switchyard and substation. So
10 we did go back into our studies and look, and we
11 identified the Sonoran Substation as \$16.6 million for
12 construction and for the Cisne Switchyard, 3.7 million.

13 CHMN. CHENAL: Member Woodall.

14 MEMBER WOODALL: I know that when you went
15 through your PowerPoint presentation, and I think it
16 was -- I think it's Exhibit 14, on page 5 of your
17 PowerPoint presentation, you discussed your contract with
18 NextEra. And you mentioned that the price per kilowatt
19 hour, that you had to be careful in looking into that
20 because different things could be included or not
21 included.

22 So at the time -- I'm just kind of setting the
23 stage. At the time that you had this price, did you know
24 what the costs of the Cisne Switchyard were going to be?

25 MR. BECK: We had a very approximate number in

1 mind of what it would cost, and so that was part of the
2 consideration as we were evaluating the bids that came
3 in, the PPA prices, what it would cost to actually get it
4 into our system.

5 And the way that the contract was set up, it
6 was that here's a power purchase price that will be
7 adjusted for interconnection costs once they're known
8 because the respondents to the RFP had no clue of what
9 those numbers would look like.

10 MEMBER WOODALL: So is it fair to say that the
11 two numbers that are listed on Exhibit 14, page 5 of your
12 PowerPoint, one article says 4.5 cents per kilowatt hour;
13 and if you read in the body, it says less than that. And
14 then there's another article that says TEP Signs a
15 Contract for Solar Farm at Historically Low 3 Cents Per
16 Kilowatt Hour.

17 Are those numbers still accurate? If you
18 factor in -- I understand that's the contract price, but
19 what I'm trying to figure out is whether or not you're
20 going to put into rate base something and so, really, the
21 actual price for the power is more than what the contract
22 said.

23 MR. BECK: That is correct. So those headlines
24 were based on the publicly available information to those
25 news sources that wrote those articles, so they were

1 based strictly on the indicated costs of energy in the
2 purchased power agreement without having any knowledge of
3 what the contract says that we also had the
4 interconnection costs on top of that.

5 MEMBER WOODALL: So the numbers there are not
6 accurate as to what you actually paid?

7 MR. BECK: They're not a true representation of
8 the ultimate final costs that we paid.

9 MEMBER WOODALL: And is that super secret? You
10 can say yes.

11 MR. BECK: Well, I don't have the number, so I
12 wouldn't be able to respond with a number at this point
13 anyway. Ultimately, it's not going to be super secret
14 because it will be in a future rate case.

15 MEMBER WOODALL: I know. That's why I was kind
16 of wondering what the number is. So, I mean, it's not
17 directly pertinent to our undertaking here today. If you
18 knew, I would ask, but I'm not asking anyone to go hunt
19 it down.

20 MR. BECK: That, I do not have.

21 MEMBER WOODALL: Thank you, Mr. Beck.

22 MS. DECORSE: And is that all of your follow-up
23 questions?

24 MR. BECK: At this point, we're still doing a
25 little research on one or two other questions we had from

1 yesterday.

2 MS. DECORSE: All right. So that concludes
3 your direct testimony today?

4 MR. BECK: Yes, it does.

5 CHMN. CHENAL: And when you say
6 "interconnection costs," you're talking about adding the
7 costs of the substation?

8 MR. BECK: The substation and the line. So our
9 price is delivered price effectively at the edge of the
10 Wilmot Energy Center, and then we have to include on top
11 of that cost the transmission line, the Cisne yard on top
12 of that.

13 Now, the Sonoran Substation and the
14 interconnection of the three lines that are connecting to
15 Sonoran are really general system upgrades, so they're
16 kind of separate and apart from the actual
17 interconnection requirement.

18 CHMN. CHENAL: Thank you.

19 Mr. Robertson, do you have any questions of
20 Mr. Beck?

21 MR. ROBERTSON: Yes. Thank you, Mr. Chairman.

22 Patrick, if you could put the Auxiliary Highway
23 PowerPoint slide, that's No. 13 in TEP Exhibit 14, up on
24 the screen and also Exhibit SW-1, which is the one that
25 depicts the South Wilmot property in its entirety.

1 And Mr. Chairman and Members of the Committee,
2 by way of background, I've already discussed with
3 Mr. Beck two of the main areas I'm going to ask him
4 questions about. They relate to the interrelationship
5 between the Wilmot Energy Center project and the future
6 development of the Verano property owned by South Wilmot
7 Land Investors.

8

9

EDMOND BECK,

10 called as a witness on behalf of Applicant, having been
11 previously sworn by the Chairman to speak the truth and
12 nothing but the truth, was examined and testified as
13 follows:

14

15

CROSS-EXAMINATION

16 BY MR. ROBERTSON:

17 Q. Ed, you will recall yesterday during my opening
18 statement, I was describing the proximity of the South
19 Wilmot property in relation to the Sonoran Corridor as
20 reflecting Pima County's preference for the Sonoran
21 Corridor and also the Aerospace Parkway.

22

23

24

Directing your attention to the slide on the
left screen, which is the Auxiliary Highway slide, and
I'll try and locate it with the green laser light here.

25

The South Wilmot property is basically located

1 in this area, is it not, which would be slightly
2 southeast of where the Sonoran Corridor turns, moving
3 from an east-west direction before it begins to proceed
4 south along what would be an extension of South Alvernon
5 Road; is that correct?

6 A. So, Mr. Robertson, generally, I think you're
7 correct. I think the Verano or the South Wilmot
8 properties are a little bit south here, but it would be
9 just south of where the Sonoran Substation would be.

10 Q. Okay. Very good.

11 A. This is the Old Vail alignment, so we're a
12 little bit south.

13 Q. So, again, it would be -- it would have the
14 proximity to the Sonoran Corridor if the Pima County
15 preference is adopted and also close proximity to the
16 existing Aerospace Parkway, and then the extension that's
17 contemplated to connect the Aerospace Parkway with the
18 Sonoran Corridor; is that correct?

19 A. Yes, that is correct.

20 Q. Okay. Now, in your application -- and you and
21 I talked about this a few moments ago -- I'd like to
22 direct your attention to page 4. And beginning on page
23 4, there is a description under this subsection of
24 Project Purpose.

25 And I'm going to focus on language in the first

1 two paragraphs in that subsection. Relevant to my line
2 of questions, that paragraph includes the following
3 language: The purpose of the Project is to meet
4 projected future energy needs in the area including
5 development along the Aerospace Parkway and ADOT's future
6 Sonoran Corridor that is planned to connect Interstate 19
7 and Interstate 10.

8 And then, in the second paragraph, we have the
9 following language: The planned Sonoran Substation will
10 provide additional capacity to the area around the
11 substation, add contingency support, operational capacity
12 and flexibility, and support economic development in the
13 area by having infrastructure that can quickly support
14 such development.

15 Against this background -- and I asked you to
16 be prepared to talk about this when we had the prehearing
17 conference last week -- could you describe for the record
18 how, moving forward, TEP, if the project is approved,
19 would be in a position to provide electric service to the
20 Verano property at South Wilmot?

21 A. Yes. Today, our distribution system, 46kV and
22 below, generally provides service to all of the area
23 around our project. With the addition of the Sonoran
24 Substation, we will have a new source for 46kV as well as
25 potentially 13 8kV facilities that can feed out to the

1 distribution customers throughout this area.

2 I think Mr. Raatz, in his testimony, is going
3 to talk a little bit more about some of our distribution
4 planning, findings, and information. But in general, it
5 showed that TEP is about at max capacity in this vicinity
6 relative to load. And especially with the expansion at
7 Raytheon, we expanded a 46kV substation to serve them
8 just recently, and that pretty much used whatever excess
9 capacity was there.

10 So, effectively, we're tapped out today. The
11 addition of the 138kV ties and our substation provides a
12 source right in the vicinity of all of this area to have
13 shorter feeders and be able to provide much more electric
14 power to the area, including the South Wilmot properties.

15 Q. Okay. And in so doing, you would achieve a
16 second purpose stated on page 4 of the application, which
17 is to strengthen the electric reliability for area
18 customers, including the future Verano area customers;
19 correct?

20 A. That is correct, yes.

21 Q. Okay. Now, Mr. Beck, you'll also recall that
22 yesterday, at one point after you had done the Google
23 Flyover portion of your testimony, I asked you some
24 questions. I indicated that both I and my client had
25 been surprised to hear about TEP requesting a 500-foot

1 corridor.

2 Since then, you have had some email
3 communication with Robert Tucker of South Wilmot, have
4 you not?

5 A. Yes, I have.

6 Q. And you and I have had further discussions on
7 that subject; correct?

8 A. Correct.

9 Q. Has the company, and I should say have -- I'm
10 speaking in the plural -- have the company and South
11 Wilmot been able to come to an agreement on what would be
12 a modification of that 500-foot corridor?

13 A. Yes, we have. TEP is okay with identifying a
14 250-foot corridor that is based with its western edge as
15 the centerline of Swan Road along the portion that's
16 adjacent to the South Wilmot properties.

17 Q. I believe a moment ago, you said the western
18 edge of it would be the centerline of South Swan Road.
19 Did you mean that would be the eastern edge?

20 A. Yes. If I said the western -- yes, the eastern
21 edge of the corridor would be the centerline of Swan
22 Road.

23 Q. Okay. In that area, is Swan Road -- the Swan
24 Road right-of-way, is that 150 feet?

25 A. That is what our records show, yes.

1 Q. Okay. So from that centerline, then extending
2 west, if we allow for the 75 feet for what would be the
3 western half of the South Swan Road right-of-way, we'd be
4 talking about the corridor extending an additional 175
5 feet onto the South Wilmot property; right?

6 A. That is correct.

7 Q. Would it be the intent of TEP, to the best of
8 its ability and in good faith, to try and locate the
9 100-foot right-of-way you're requesting immediately
10 adjacent to the western side of Swan Road or as close to
11 that western side as possible?

12 A. Yes, that would be our intent.

13 Q. And is it your understanding that the company's
14 attorneys and I will be working on appropriate language
15 for both the proposed Certificate of Environmental
16 Compatibility and any other necessary document to submit
17 to the Committee for their consideration?

18 A. Yes.

19 MR. ROBERTSON: That's all I have.

20 Thank you, Mr. Beck, and thank you

21 Mr. Chairman.

22 CHMN. CHENAL: Member Woodall.

23 MEMBER WOODALL: I'm not spatially oriented,
24 and what I wanted to know is are you going to need a new
25 legal put in the CEC based upon the accommodation that

1 you're proposing to make with Mr. Robertson's clients?

2 MR. BECK: We are adjusting the legal
3 accordingly. Yes, we do need to make changes to that.

4 MEMBER WOODALL: Okay. Thank you. And you'll
5 have those for us?

6 MR. BECK: That is our plan, yes.

7 MEMBER WOODALL: Those technical elves are, I'm
8 sure, busily working away.

9 Thank you very much, Mr. Beck.

10 CHMN. CHENAL: Mr. Beck, I just want to make
11 sure I understand the concept that you've discussed with
12 Mr. Robertson.

13 So for the northern portion of the route, the
14 applicant is still seeking a 1,000-foot corridor with a
15 300-foot right-of-way; is that correct?

16 MR. BECK: That is correct.

17 CHMN. CHENAL: And for the southern portion,
18 your corridor is -- the applicant is now going to agree
19 to a corridor of 200 feet in lieu of the 500 feet that's
20 been requested in the application. Is that also correct?

21 MR. BECK: 250 feet.

22 CHMN. CHENAL: 250. And then the right-of-way
23 will be 100 feet for the southern portion?

24 MR. BECK: Yes.

25 CHMN. CHENAL: Okay.

1 MR. BECK: And just to be very clear for the
2 record, the 250-foot from centerline would start at the
3 crossover point where we cross from the east to the west
4 and run down to the edge of the Wilmot Energy Center
5 property.

6 CHMN. CHENAL: Okay. That was going to be my
7 next question, where was that change going to occur.

8 But north of that changeover point, still
9 within the southern portion of the project, you will
10 still seek a 500-foot corridor; is that correct?

11 MR. BECK: At this point, that is our intent.
12 And just so the Committee understands, that property --
13 we would be purchasing that property for the Sonoran
14 Substation anyway, and so at least that portion would be
15 on our own lands. So the corridor is of less value, but
16 we would stay with the 500 for now.

17 CHMN. CHENAL: Okay.

18 Member Noland.

19 MEMBER NOLAND: Thank you.

20 Mr. Beck, so you'll have 180 feet, basically,
21 or 85 feet? 175 feet?

22 MR. BECK: 175.

23 MEMBER NOLAND: Yeah. To put a 100-foot
24 right-of-way; is that correct?

25 MR. BECK: Correct.

1 MEMBER NOLAND: Okay. On your exhibit with the
2 map of the corridors, you did an actual legal description
3 on all of the corridors you proposed, and it was done by
4 a land surveyor; is that correct?

5 MR. BECK: For the record, we did do our
6 preferred alignments, and it was done by a registered
7 land surveyor. We had not produced the legal for the
8 other two alignments yet.

9 MEMBER NOLAND: But the one you did do, you did
10 with a land surveyor?

11 MR. BECK: Correct. And it was a stamped legal
12 description, yes.

13 MEMBER NOLAND: So you really won't need that
14 in the portion if we approve Southern 1 where there's the
15 crossover. You really won't need to resurvey that, will
16 you? You could just say the 250 feet from the centerline
17 of Swan Road?

18 MR. BECK: That is correct. For the
19 description of the corridor, that's correct.

20 MEMBER NOLAND: And if we do that anywhere
21 else, you could also do that. So you wouldn't have to
22 wait and have it resurveyed or whatever?

23 MR. BECK: Correct. And even to the extent our
24 internal surveyors would be rewriting the description.
25 So it's not a physical out-in-the-field survey.

1 But to your point, where we're tying it to a
2 roadway, that corridor is pretty easy to do.

3 MEMBER NOLAND: If you could put the map back
4 up that's like the placemat.

5 And you just said that you wouldn't have to be
6 purchasing the right-of-way for the northern portion of
7 the Southern 1; is that correct?

8 MR. BECK: Well, we won't have that land. We'd
9 be actually leasing the land as opposed to purchasing it
10 outright.

11 MEMBER NOLAND: Can you show me exactly how
12 much of that land? Is it more than just what you're
13 showing for just the substation?

14 MR. BECK: I think that would be a question
15 better addressed by Ms. Darling in her testimony.

16 MEMBER NOLAND: Okay. I'll wait.

17 CHMN. CHENAL: Any further questions before we
18 turn it over to Mr. Schmaltz?

19 (No response.)

20 CHMN. CHENAL: Mr. Schmaltz, do you have any
21 questions?

22 MR. SCHMALTZ: Yes. Thank you, Mr. Chair,
23 Members of the Committee.

24

25

1 CROSS-EXAMINATION

2 BY MR. SCHMALTZ:

3 Q. Mr. Beck, for my own edification in terms of
4 leasing or easement for the rights-of-way, do you
5 acquire -- you don't acquire fee title. Or do you have
6 easements or I think the proposal is to lease the land
7 from us for the route?

8 A. I know for the substation, I believe we plan to
9 lease the land. But for the transmission line --

10 Q. Easement?

11 A. -- it would be an easement.

12 Q. So in that easement, what kind of restrictions
13 do you need in terms of placed on the use of the property
14 where that ultimate 300-foot-wide easement would be?

15 A. Basically, we would not allow anything that
16 would interfere with our future maintenance activities --
17 construction of the line, maintenance of the line, and
18 anything that would get too close to the wires. So we
19 have kind of a list of standard things that are allowed
20 within our easements.

21 Q. And for the Northern 1, Swan jogs over a little
22 bit. And so would Northern 1 be a straight north and
23 south, or would it follow the line of the roadway? How
24 would the configuration of Northern 1 be? It would be
25 all along that frontage of the road?

1 A. Northern 1 would be along the frontage of the
2 road but set back behind the distribution line that sits
3 right adjacent to the roadway today.

4 Q. So it would extend to the east?

5 A. East, yes.

6 Q. Got it.

7 MR. SCHMALTZ: That's all I had. Thank you.

8 CHMN. CHENAL: Ms. DeCorse, any further
9 questions of Mr. Beck?

10 MS. DECORSE: No.

11 CHMN. CHENAL: Okay. You now have a panel
12 there's been sworn in, so --

13 MS. DECORSE: Would you like me to go through
14 the exhibits and admit the exhibits from Mr. Beck now?
15 We're still waiting on the exhibits you requested
16 yesterday that were on the left screen, but we'll get
17 those in.

18 CHMN. CHENAL: We can do that now.

19 MS. DECORSE: Okay. All right.

20 CHMN. CHENAL: You hate to go to the end of the
21 hearing and forget to have them admitted, so let's do
22 that now.

23 MS. DECORSE: Right. And there's a lot of
24 them, so bear with me.

25 We'll move for the admission of TEP-1, TEP-2,

1 TEP-3, TEP-4, TEP-8, TEP-9, TEP-11, TEP-12, TEP-14, and
2 TEP-18, which was the additional exhibit, Staff's letter.

3 CHMN. CHENAL: Okay. It's been moved for the
4 admissibility TEP-1, 2, 3, 4, 8, 9, 11, 12, 14, and 18.

5 Are there any objections?

6 (No response.)

7 CHMN. CHENAL: Okay. No objections, those are
8 admitted.

9 (Exhibits TEP-1, TEP-2, TEP-3, TEP-4, TEP-8,
10 TEP-9, TEP-11, TEP-12, TEP-14, and TEP-18 were admitted.)

11 MS. DECORSE: And I believe now we're going to
12 move on to Mr. Raatz, if it's okay with everyone, his
13 PowerPoint.

14

15

ERIC RAATZ,

16 called as a witness on behalf of Applicant, having been
17 previously sworn by the Chairman to speak the truth and
18 nothing but the truth, was examined and testified as
19 follows:

20

21

DIRECT EXAMINATION

22 MS. DECORSE:

23 Q. I believe you're sworn in and still under oath,
24 but can you please state your name again for the record.

25 A. Yes. It's Eric Raatz.

1 Q. And you are a senior transmission planner for
2 Tuscon Electric Power; is that correct?

3 A. Yes, that's correct.

4 Q. So before we start, I'd like to discuss the
5 exhibits you prepared for today's hearing. So you have
6 prepared your direct testimony, which was filed on
7 September 17th and marked as Exhibit TEP-5. Do you have
8 that in front of you?

9 A. Yes, I do.

10 Q. All right. And I believe you also prepared a
11 PowerPoint presentation, but we'll get to that in a
12 second.

13 So starting with TEP-5, was that prepared by
14 you or under your direction, your direct testimony?

15 A. Yes, it was.

16 Q. And have you had a chance to review your direct
17 testimony since you filed it?

18 A. Yes, I have.

19 Q. And do you have any corrections or changes
20 you'd like to make to that today?

21 A. No, I do not.

22 Q. So the testimony that's presented in TEP-5 is
23 true and correct to the best of your knowledge?

24 A. Yes.

25 Q. So if I asked you the questions that are set

1 forth in that Exhibit TEP-5, your answers would be the
2 same?

3 A. Yes.

4 Q. And moving on to your PowerPoint presentation
5 that's shown here on the screen, was that prepared by
6 you?

7 A. Yes, it was.

8 Q. And do you have any corrections or changes to
9 make to that today?

10 A. No, I do not.

11 Q. So the information that's presented in TEP-15
12 is true and correct to the best of your knowledge?

13 A. Yes, it is.

14 Q. And so -- I know that you haven't previously
15 testified before the Committee, so why don't you start by
16 giving them your background, education, and role in the
17 project.

18 A. Okay. I'm currently employed by TEP as a
19 senior transmission planning engineer.

20 In this role, I oversee the development of the
21 ten-year plan and annual budget studies, and I ensure
22 compliance with NERC standards.

23 For this project, I ensured that it was
24 included in the capital budget studies as well as the
25 ten-year plan.

1 I also represent TEP as a planning management
2 committee in the WestConnect regional process.

3 I have a Bachelor of Science in civil
4 engineering from the University of Arizona.

5 I'm a registered professional engineer in the
6 State of Arizona.

7 I have 18 years of experience, engineering
8 experience, ten years of experience in the electric
9 utility industry as employed by TEP.

10 Five years as a civil transmission engineer.
11 In that role, I designed and engineered substations and
12 transmission lines ranging from subtransmission to HV and
13 EHV.

14 And prior to that, I have eight years of
15 experience in the private sector as a civil engineer,
16 where I was responsible for all facets related to civil
17 engineering with the development of residential and
18 commercial development.

19 Q. Thank you.

20 Now, if you could please summarize the topics
21 that you're going to cover today.

22 A. Sure.

23 I'm going to start with the System Impact
24 Study, and I'm also going to talk about the project's
25 inclusion within that ten-year plan. And I'm going to

1 address the company's philosophy on communication signal
2 issues and also touch on the electrical magnetic field
3 study that was conducted on behalf of the project.

4 Q. So why don't you start by walking us through
5 the technical studies performed in relation to the
6 project, specifically, the System Impact Study you just
7 mentioned.

8 A. Okay. Before I do that, I was going to talk
9 about the standard large generator interconnection
10 procedure that TEP has that drives the System Impact
11 Study.

12 So the procedure starts with a feasibility
13 study, and TEP typically urges the customer or
14 interconnection requests to negate the feasibility study
15 if they have already gained access to the land or own the
16 land, and they go right from the feasibility to the
17 System Impact Study. Very similar.

18 The System Impact Study is a planning study,
19 and it is performed to make sure that the interconnected
20 facility will not disturb or disrupt the existing system.

21 And from the interconnection System Impact
22 Study, we go to the facilities study. And the facilities
23 study is a more detailed engineering document where we
24 put together the cost estimate. So they do more of an
25 overall design of the facilities that are required to

1 interconnect.

2 CHMN. CHENAL: Let me just ask a question here.
3 The proposed interconnection is what part of this
4 project? The three circuits coming down Swan and then
5 connecting to the existing circuit and then down to
6 Sonoran and then back and reconnecting? What exactly is
7 that -- is the connection?

8 MR. RAATZ: Mr. Chairman, the point of
9 interconnection will be the Cisne Switchyard. So the
10 NextEra facilities will interconnect to the TEP system at
11 the Cisne Switchyard at that point.

12 CHMN. CHENAL: So what's being connected? I'm
13 thinking male and female ends. What's being connected is
14 the power being generated by the solar plant and how that
15 connects to the facilities that are part of the TEP
16 systems; is that correct?

17 MR. RAATZ: Mr. Chairman, yes, that's correct.

18 CHMN. CHENAL: It may be obvious to a lot, but
19 there's a lot of lines. We use the words "connect to,"
20 but then interconnection is, I guess, a term of art that
21 applies to a power source that's being connected to the
22 existing system; correct?

23 MR. RAATZ: That's correct, Mr. Chairman.

24 And I believe I have some slides that we'll
25 touch on, hopefully give a --

1 CHMN. CHENAL: You probably have slides on
2 every question I could possibly dream up, and if I just
3 be quiet and wait, I'll have my answers -- questions
4 answered, but I'm too impatient.

5 Member Woodall.

6 MEMBER WOODALL: Would you please explain the
7 queue process as it relates to interconnection? And we
8 don't need a deep-dive on this. I just want it on the
9 record of how you study and what comes first. So if you
10 could do that, that would be helpful.

11 MR. RAATZ: Mr. Chairman, Member Woodall, yes.
12 The queued process is for an interconnection request.
13 For instance, this is Q-59. So any interconnection
14 request that came prior to this interconnection request
15 is also considered in the System Impact Study for this
16 study, and scenarios are run removing, adding all the Qs
17 to make sure that we have everyone -- given everyone
18 proper treatment in the System Impact Study process and
19 the interconnection process.

20 MEMBER WOODALL: So, basically, the studies are
21 based upon the hypothetical that all of the projects in
22 front of it would be actually built as proposed?

23 MR. RAATZ: Member Woodall, yes, that is
24 correct.

25 MEMBER WOODALL: Okay. Thank you. I have no

1 other questions on this topic.

2 Q. BY MS. DECORSE: And if you could then just
3 give us an overview of the System Impact Study that was
4 performed for this project.

5 A. Okay. Before I do that, I'm going to start --
6 with the next couple slides, I'll show what was
7 considered for the System Impact Study for this project.

8 So the screen on the right shows the system as
9 it currently is today. On the tour today, we drove by
10 the Irvington Substation, and we saw the three lines
11 coming out right there on the triple-circuit structure.
12 Their existing lines are shown as dashed, and the
13 existing substations are shown as gray.

14 From this picture here, Irvington is up here on
15 the screen on the left. And the point where the three
16 lines go different ways was our first stop on the tour.
17 And we have a line that went from Irvington and goes to
18 our South Loop Substation. And in the lower left-hand
19 corner of the screen on the left, that's our South Loop
20 Substation.

21 Then we have the two remaining lines coming
22 from Irvington, and they head in the easterly direction
23 to our Robert Bills Substation and our Vail Substation.

24 And what we're planning on doing is basically
25 rerouting these lines. So they'll be rerouted into and

1 out of the planned Sonoran Substation. So we'll be
2 removing that point of interconnection there where the
3 three lines diverge at the interconnection of East Old
4 Vail Connection Road and South Swan Road.

5 And the next step, then, will be bringing the
6 lines into and out of the planned Sonoran Substation.
7 And the green represents the new circuits that we'll be
8 constructing, and then the new Sonoran Substation we'll
9 be constructing. And then the dots here represent
10 that -- those two dots with the line through it represent
11 a single structure.

12 And if we were to take a look, cut through this
13 up on the screen on the left, we can see this is what
14 we'd be looking at, our 300-foot corridor -- or, excuse
15 me, 300-foot right-of-way. And this circuit here, if we
16 were looking in the northerly direction, would be Sonoran
17 to South Loop Substation. And this would be either
18 Irvington to Sonoran circuit No. 1, Irvington to Sonoran
19 circuit No. 2, Irvington to Sonoran circuit No. 3, and
20 then Sonoran to either Robert Bills or Vail.

21 CHMN. CHENAL: Can you do that again, please?

22 MR. RAATZ: Yeah, absolutely.

23 CHMN. CHENAL: I had it and I lost it, so I
24 need to get it again.

25 MEMBER NOLAND: Maybe a little slower.

1 CHMN. CHENAL: Yeah.

2 MR. RAATZ: Okay.

3 So this will be the structure -- the structure
4 on the left on the screen on the left. So we have the
5 circuit here on the left will be Sonoran to South Loop,
6 and this circuit right here will be -- this line right
7 here, that will be Irvington to Sonoran No. 1.

8 This line right here will be this line right
9 here, Irvington to Sonoran No. 2.

10 And this line right here will be this line
11 right here, Irvington to Sonoran No. 3.

12 And, finally, we have our last structure on the
13 right. This will either be Irvington to Robert Bills or
14 Irvington to Vail -- or, excuse me -- not Irvington.
15 Sonoran to Robert Bills -- sorry -- and Sonoran to Vail.

16 And the screen on the left, if we can look
17 here -- this is kind of like if we're looking left
18 standing in that corridor. And on the outside here, this
19 would be the planned Sonoran Substation to the south.
20 This is the Sonoran Substation down here.

21 And this would be Irvington to Sonoran circuit
22 No. 1, Irvington to Sonoran circuit No. 2, Irvington to
23 Sonoran circuit No. 3, and then Sonoran to either Robert
24 Bills or Vail, and Sonoran to either Robert Bills or
25 Vail.

1 And, once again, we're standing in the corridor
2 looking south to the planned Sonoran Substation.

3 Q. BY MS. DECORSE: And, Mr. Raatz, are those
4 existing? When you say No. 1, No. 2, No. 3, are those
5 connecting to existing?

6 A. No, they are not. Currently -- the lines will
7 be rerouted. So, currently, we have Irvington to South
8 Loop existing and Irvington to Vail Substation existing
9 and Irvington to Robert Bills existing.

10 With the rerouting of those, these three lines
11 right here, that will be Irvington to Sonoran No. 1,
12 Irvington to Sonoran No. 2, Irvington to Sonoran No. 3,
13 and we bring those into and out of the planned Sonoran
14 Substation. So these three circuits, you can see, are
15 being brought into the planned Sonoran Substation and
16 with three leaving.

17 CHMN. CHENAL: Question: On the screen on the
18 left, we're looking south along Northern Preferred; is
19 that correct?

20 MR. RAATZ: Northern 2 Preferred, yes, that's
21 correct, Mr. Chairman.

22 CHMN. CHENAL: Northern 2 Preferred.

23 And that's approximately where, on our tour
24 today, the bus stopped as we went down Old Vail Road, and
25 we stopped and we had our -- Mr. Beck indicated that this

1 is approximately where that corridor would be heading
2 south. Is that approximately where the bus was?

3 MR. RAATZ: Mr. Chairman, yes, that's correct.

4 CHMN. CHENAL: Okay.

5 Q. BY MS. DECORSE: And, Mr. Raatz, I know you're
6 probably going to touch on it, but if you could you
7 explain why this project has both a substation and a
8 switchyard. I don't know if that's where you were going.

9 A. Yes, I can. So at a minimum, an
10 interconnection would require a switchyard, and it would
11 have breakers and protection equipment.

12 And a substation, as Mr. Beck spoke to in his
13 testimony yesterday, includes transformation as well as
14 breakers and protection equipment.

15 In March of 2017, our Distribution Planning and
16 Engineering Department had identified a need for a
17 substation in this area of the Aerospace Parkway and Pima
18 County's planned Aerospace Defense and Technology
19 Research and Business Park.

20 And so TEP took this opportunity to alleviate
21 the need for that substation and alleviate loading on the
22 existing subtransmission and distribution circuits by
23 placing the Sonoran Substation in the area of the
24 project.

25 And then the planned -- excuse me. The planned

1 Cisne Switchyard is required at the point of
2 interconnection as well and provides a point of
3 interconnection for the Wilmot Energy Center.

4 And that is shown on the next slide here.
5 Everything in green is southern portion, and then
6 everything in blue is the Wilmot Energy Substation and
7 the generating facilities, the 100-megawatt solar yard
8 and the 30-megawatt battery storage facility. So this
9 encompasses the entire project.

10 Q. And could you expand on the additional
11 contingency support that was previously mentioned? Or I
12 don't know if you were going to speak to that later.

13 A. Yes.

14 Contingency support -- so from a planning
15 perspective, we're required to plan the system for
16 certain scenarios, and one of those scenarios being the
17 loss of two circuits on a common tower.

18 So we have three circuits coming out of
19 Irvington Substation on a common tower. So one of the
20 scenarios we have to consider is the loss of these two
21 circuits here.

22 The way it's currently configured from
23 Irvington to, let's say, Robert Bills, we have to study
24 the loss of these two lines simultaneously. By placing
25 the planned Sonoran Substation in here, if we lose two

1 circuits on a common tower, we still have a feed going to
2 the planned Sonoran Substation, which will provide a path
3 of flow to either Vail or Robert Bills in the scenario in
4 which I spoke.

5 CHMN. CHENAL: Member Palmer.

6 MEMBER PALMER: Mr. Raatz, so yesterday, as we
7 looked at the letter from ACC, their indication was that
8 there was no effect on the reliability of the system,
9 improving the reliability of the system. Yet what we're
10 seeing here, it appears that there is an obvious
11 improvement to the reliability.

12 Could you address that?

13 MR. RAATZ: The planned Sonoran Substation does
14 increase the reliability of the existing TEP system. Let
15 me pull that letter up.

16 Mr. Commissioner, Member Palmer, may I get back
17 to you on that question?

18 MEMBER PALMER: Certainly.

19 Q. BY MS. DECORSE: And were there any other
20 requirements identified in the System Impact Study?

21 A. Yes. There was an additional requirement
22 identified in the System Impact Study. We have to
23 replace several breakers at our existing Vail Substation.
24 Short-circuit analysis performed identified several
25 breakers at our Vail Substation indicating that they were

1 lacking in fault current interrupter capability.

2 Q. So you mentioned in your overview that you're
3 going to speak to the inclusion of the project in the
4 company's ten-year plan. Could you touch on this?

5 A. Yes. The project was included in the company's
6 most recent submittal of the ten-year plan. However,
7 since the submittal of the ten-year plan, there have been
8 several changes made to the project.

9 First, the project has been renamed -- renamed
10 the interconnection facility from WEC to Cisne. And the
11 reason for this is TEP tries to tie a facility to an
12 existing landmark in the area. And we went back and
13 researched, and we have an existing Wilmot Substation and
14 we have an existing Swan Substation. So would anyone on
15 the Committee care to take a guess as to what Cisne
16 means?

17 MEMBER NOLAND: Swan.

18 MEMBER PALMER: Swan.

19 MR. RAATZ: Swan. There you go. Thank you.

20 MEMBER PALMER: I looked it up on my Apple
21 translator.

22 MEMBER NOLAND: And he told me.

23 MR. RAATZ: Since then, we've also reclassified
24 the interconnection facility from a substation to a
25 switchyard. In the ten-year plan, it was classified as a

1 substation. At that time, we weren't sure where the
2 transformation was going to take place, if it was going
3 to be located in the NextEra-owned facilities or the
4 TEP-owned facilities. And since then, it's been
5 determined that TEP will be receiving power at 138 rather
6 than the 34.5kV generated at the facility.

7 CHMN. CHENAL: I have a question on that.

8 Back to my question of Mr. Beck the other day
9 and Member Woodall's point that a switchyard is included
10 within the jurisdiction of the Committee and the
11 Corporation Commission.

12 When you take that switchyard and you add a
13 transformer to it, it somehow takes it, according to one
14 interpretation, out of the jurisdiction. So I thought
15 this was going to be a substation, but this says it was
16 classified back from a substation to a switchyard. So
17 now I'm a little confused.

18 MR. RAATZ: Mr. Chairman, the Cisne facility
19 was classified as a substation in the ten-year plan, and
20 it's been reclassified as a substation -- or, excuse me,
21 as a switchyard.

22 CHMN. CHENAL: Okay. But Cisne is not part of
23 this application. I guess I'm a little confused.

24 MR. RAATZ: Cisne is the switchyard we're
25 requesting.

1 CHMN. CHENAL: So it is. Yes.

2 Member Woodall.

3 MEMBER WOODALL: So have you communicated with
4 Staff with respect to the modifications in this change to
5 your ten-year plan? Because my understanding is I think
6 possibly this week, Staff is having workshops for the
7 Biennial Transmission Assessment. Or are you planning
8 to? Or after this nudge, will you?

9 MR. RAATZ: After this nudge, Member Woodall,
10 we will.

11 MEMBER WOODALL: It might be helpful. I mean,
12 I don't know how big a deal this is for the transmission
13 assessment. I suspect it's not major, but since you are
14 modifying it, it would probably be helpful to Staff. And
15 I would imagine you would do that by some form of
16 correspondence.

17 Thank you.

18 MR. RAATZ: Thank you.

19 There was one final change from the ten-year
20 plan. In the ten-year plan, there was a Phase 2 filed
21 for this project, and it had a line that went from the
22 interconnection facility to our existing South loop
23 Substation. And we have since then removed the request
24 for that line.

25 Q. BY MS. DECORSE: And during the design process,

1 does the company consider the impact on communication
2 signals?

3 A. Yes. As part of the CEC process, TEP
4 identifies owners of communication facilities in the area
5 of the project.

6 TEP has made contact with the communication
7 signal providers in the area of the project. There was
8 one owner identified and contacted, and no concerns were
9 raised.

10 TEP does not anticipate any impacts to existing
11 communication signals in the area as there are existing
12 power lines in the area. However, if, after the project
13 goes into service and issues are identified, TEP will
14 work with the customer as necessary to resolve the issue.

15 Q. And did TEP perform EMF studies for this
16 project?

17 A. TEP contracted out EMF studies to be performed
18 for this project. Typically, electrical fields aren't
19 much of a concern, so the following slides will identify
20 the magnetic fields.

21 So the slide shown up on the screen shows
22 typical magnetic field values for typical household
23 appliances. You can see a microwave oven, at a distance
24 a half a foot away, produces 300 milligauss; a vacuum
25 cleaner, a half a foot away, 300 milligauss; and then a

1 138kV transmission line, at zero feet away, typical
2 values are 40 milligauss.

3 And the source of this table is from the
4 National Institute of Environmental Health and Science.

5 So we did perform -- on the next slide, here we
6 have a graph showing the magnetic field for the northern
7 portion of the project. And the slide shows the
8 predicted values for the northern portion of the project
9 based upon the study parameters.

10 The centerline -- so the peak represents the
11 centerline of each of the structures. And here we've got
12 the 2021 loading and the 2026 loading. And the line over
13 to the left and right represents the edge of
14 right-of-way. And at the edge of right-of-way for the
15 northern corridor, we anticipate magnetic field
16 measurements of 21.6 milligauss in '21 and decreasing in
17 2026.

18 And for the southern portion, once again, we've
19 got the centerline of the structure. And at the edge of
20 right-of-way, we have 8.47 milligauss anticipated.

21 And this table I put together from the previous
22 table you'd seen with the addition of the northern
23 portion of the project using the 2021 loading and the
24 southern portion of the project as a comparison. We can
25 see we have 21.6 milligauss at the edge of right-of-way

1 and 8.47 milligauss at the edge of right-of-way when
2 compared with typical household appliances.

3 Q. And based on your testimony today, are there
4 any concluding remarks you'd like to leave us with?

5 A. Yes.

6 In summary, the interconnection will not have
7 an adverse impact on the existing TEP system other than
8 the breakers identified in the System Impact Study.

9 The project relieves loading on existing
10 distribution and subtransmission circuits.

11 The project will add contingency support to the
12 existing system.

13 And the project will add additional generation
14 resources to the system, providing additional
15 reliability.

16 And the project adds additional renewable
17 resources to the system, helping TEP achieve its goal of
18 30 by '30.

19 And it's anticipated the project will not have
20 an adverse impact on existing communication signals in
21 the area of the project.

22 And EMF created by the project will not be
23 significant at the project right-of-way.

24 CHMN. CHENAL: Member Woodall.

25 MEMBER WOODALL: Mr. Raatz, I take it you are

1 familiar with the EMF study that you commissioned for
2 POWER Engineers, which is appended to the application
3 under Exhibit I. I believe it's labeled Exhibit I-1.
4 You're familiar with that?

5 MR. RAATZ: I'm aware of that.

6 MEMBER WOODALL: Do you have a copy of it in
7 front of you? Let me know when you do.

8 MR. RAATZ: I do.

9 MEMBER WOODALL: The first thing I note is that
10 the report itself is labeled Revision A. Do you see
11 that?

12 MR. RAATZ: Yes, I do.

13 MEMBER WOODALL: And I note that in the
14 introduction to this report, which is on page 1 of
15 Exhibit I-1, it indicates that they apparently used a
16 different case. They used a 2026 case; is that correct?

17 MR. RAATZ: That's correct. They used a 2021
18 case as well as a 2026 case.

19 MEMBER WOODALL: So what was revised?

20 MR. RAATZ: Between the two cases?

21 MEMBER WOODALL: Well, what was the original
22 report that this constitutes a revision of?

23 MR. RAATZ: Member Woodall, I'll have to
24 research that.

25 MEMBER WOODALL: Let me just ask you another

1 question.

2 Continuing to look at page 1 under the heading
3 Data, the first bullet point says: Though the line is on
4 structures that are double circuit for a portion of its
5 length, TEP requested that we only consider the single
6 circuit in this study.

7 Do you see that language?

8 MR. RAATZ: Yes, I do.

9 MEMBER WOODALL: Can you tell me why TEP made
10 this specific request of the POWER Engineers?

11 MR. RAATZ: I believe it was a
12 misunderstanding.

13 The circuits for the southern portion, the
14 structures are designed as double-circuit structures.
15 However, we're only stringing one circuit at this time.

16 MEMBER WOODALL: So does your EMF study that's
17 appended to the application, does it appropriately
18 analyze the situation that is going to be, in reality,
19 constructed?

20 MR. RAATZ: Yes, it does.

21 MEMBER WOODALL: So the fact that you've got
22 three double circuits has nothing to do with the fact
23 that you're studying a single circuit?

24 MR. RAATZ: The single circuit was for the
25 southern portion.

1 Member Woodall, if I could direct you to the
2 screen on the right, we do have graphs showing the
3 anticipated magnetic fields. We did commission POWER
4 Engineers to conduct another study.

5 MEMBER WOODALL: Which is in the application?

6 MR. RAATZ: That's correct.

7 MEMBER WOODALL: All right. That's my point.

8 I want to make sure that I ask this correctly.
9 Have you done EMF studies for all of the proposed lines
10 that you have in the application, and have the
11 conclusions been that there's not going to be any
12 exceedances?

13 MR. RAATZ: Member Woodall, that's correct.

14 MEMBER WOODALL: Thank you very much. Next
15 time, I'd kind of like to see that report because this
16 got me all excited. Thank you.

17 MR. RAATZ: Thank you.

18 Q. BY MS. DECORSE: And, Mr. Raatz, does that
19 conclude your testimony today?

20 A. Yes, it does.

21 MS. DECORSE: So with that, Mr. Chairman, I
22 believe our direct presentation of Mr. Raatz is complete.

23 CHMN. CHENAL: Does the Committee have any
24 questions of Mr. Raatz?

25 (No response.)

1 CHMN. CHENAL: Mr. Robertson, do you have any
2 questions of Mr. Raatz?

3 MR. ROBERTSON: Very briefly, Mr. Chairman.
4

5 CROSS-EXAMINATION

6 BY MR. ROBERTSON:

7 Q. Mr. Raatz, during my questioning of Mr. Beck
8 this afternoon, when I asked him the manner in which and
9 the extent of which the Wilmot Energy Center project and
10 TEP's related facilities would enable the company to be
11 able to serve future growth and development occurring on
12 the Verano project acreage, he confirmed that it would
13 and briefly described the reasons why, and he deferred to
14 you for any more detail.

15 Let me just ask you simply, would you concur
16 with his conclusion that the Verano project property will
17 be served in the future as a result of the Wilmot Energy
18 Center and TEP's related facilities?

19 A. Mr. Chairman, Mr. Robertson, yes, I would
20 concur.

21 Q. Okay. Is there anything you would like to add
22 to Mr. Beck's testimony as to exactly how that would
23 occur?

24 A. At this time, no.

25 MR. ROBERTSON: Okay. Thank you.

1 That's all I have, Mr. Chairman.

2 CHMN. CHENAL: Thank you.

3 Mr. Schmaltz.

4 MR. SCHMALTZ: No questions.

5 CHMN. CHENAL: One more question, Mr. Raatz.

6 I'm trying to see the schematic for the Cisne
7 Switchyard in the application. Can you point me to where
8 that is?

9 MR. RAATZ: Mr. Chairman, that is Exhibit G-6.
10 That would be right before the visual simulations.

11 CHMN. CHENAL: Member Woodall.

12 MEMBER WOODALL: So this is -- what you're
13 pointing out to in Exhibit G is a diagram that is labeled
14 at the top, apparently, with a page number, but it's cut
15 off in mine. But the legend on the right-hand -- or the
16 bottom of it says Equipment Layout Plan 138/34.5kV Cisne
17 Switchyard. Is that what you're referring to?

18 MR. RAATZ: Member Woodall, yes, that's
19 correct.

20 MEMBER WOODALL: Okay. Thank you.

21 CHMN. CHENAL: That's all I have.

22 Ms. DeCorse, any follow-up?

23 MS. DECORSE: No.

24 MR. ROBERTSON: Mr. Chairman.

25 CHMN. CHENAL: Yes, Mr. Robertson.

1 Q. BY MR. ROBERTSON: Directing your attention to
2 the summary slide which is on the screen, which is slide
3 16 in TEP Exhibit 15, I asked you in what ways this
4 project would benefit the company's ability to serve
5 Verano. Looking at that, the second, third, and fourth
6 bullet points on that slide actually indicate ways in
7 which it would augment the company's current ability;
8 correctly?

9 A. Correct.

10 Q. And thank you for correcting my "correctly."
11 Thank you.

12 A. Thank you.

13 CHMN. CHENAL: Thank you.

14 MS. DECORSE: Mr. Chairman, I would like at
15 this point maybe to move the admission of Mr. Raatz's
16 exhibits.

17 CHMN. CHENAL: That's 5 and 15?

18 MS. DECORSE: Yeah, that's correct.

19 CHMN. CHENAL: Okay. TEP-5 and TEP-15 have
20 been moved for admission.

21 Any objection?

22 (No response.)

23 CHMN. CHENAL: Okay. TEP-5 and 15 are
24 admitted.

25 (Exhibits TEP-5 and TEP-15 were admitted.)

1 CHMN. CHENAL: All right. Your panel is still
2 anxious -- still members anxious to testify. So we have
3 a few more minutes before we'll take our afternoon break.

4 MS. DECORSE: And I'm going to defer now to
5 Mr. Derstine.

6 MR. DERSTINE: I'm just checking to make sure
7 we have the right slide deck queued up.

8 CHMN. CHENAL: Mr. Derstine, would you want a
9 five- or ten-minute break?

10 MR. DERSTINE: Yes, I think that would help us.

11 CHMN. CHENAL: Yes, let's take a ten-minute
12 break now, and then we'll resume in ten minutes.

13 Thank you so much.

14 (A recess was taken from 2:09 p.m. to
15 2:37 p.m.)

16 CHMN. CHENAL: This is the time set for
17 resumption of the afternoon portion of the hearing.

18 I think we left it with you, Mr. Derstine, and
19 you were going to call your next witness.

20 MR. DERSTINE: Yes. We're going to proceed
21 with Renee Darling.

22
23
24
25

1 RENEЕ DАRLING,
2 called as a witness on behalf of Applicant, having been
3 previously affirmed by the Chairman to speak the truth
4 and nothing but the truth, was examined and testified as
5 follows:

6

7

DIRECT EXAMINATION

8

BY MR. DERSTINE:

9 Q. Renee, you are under oath, but for purposes of
10 the transcript, why don't you state your name for the
11 record.

12 A. Renee Darling.

13 Q. And the Committee has had the pleasure of
14 hearing you testify in a couple of our prior cases this
15 year, but why don't you go ahead and remind them of your
16 position with the company and some of your educational
17 background and experience, please.

18 A. I'm an environmental and land use planning
19 supervisor in our Land Resources Department. I have a
20 Bachelor of Science degree in botany and many post-degree
21 classes in project management, transmission line siting,
22 and public involvement. Besides my supervisory
23 responsibilities, I'm involved our alternative route
24 analysis permitting. I also oversee the resource
25 studies, and I'm also involved in the public and

1 stakeholder engagement process.

2 Q. Specifically, with regard to this project, the
3 Wilmot Energy Center or Sonoran to Wilmot Energy Center
4 project, what was your role and responsibility?

5 A. I oversaw TEP's planning process, ensured that
6 the project developed according to TEP's design
7 philosophy and that the appropriate studies were
8 conducted, reports prepared and the application written.
9 I also oversaw the public and stakeholder engagement and
10 signage posting.

11 Q. And are those, in general, the topics that
12 you're going to cover today in your testimony?

13 A. Yes, that's correct.

14 Q. In past cases we've talked about and you've
15 covered TEP's design philosophy for transmission projects
16 like this, but it's probably worthwhile to just talk
17 about that again in terms of kind of the general
18 philosophy or approach that the company takes in planning
19 or developing a new project.

20 A. Of course. Our goal is always to minimize
21 impacts by using existing infrastructure or corridors
22 wherever they're available and it's practical to do so.
23 However, we also work closely with the landowners who
24 would be impacted most directly by the project and
25 stakeholders.

1 Q. Before we jump into the rest of your testimony,
2 I want to touch on and walk through a little bit the
3 exhibits that you prepared and get them identified for
4 the record.

5 So I think you did prepare a written direct
6 testimony that's been marked as TEP-6; is that correct?

7 A. Yes.

8 Q. And you've had a chance to review TEP-6 before
9 the hearing today?

10 A. Yes, I did.

11 Q. The information presented in TEP-6, is that
12 still true and correct to the best of your knowledge?

13 A. Yes, it is.

14 Q. If I asked you the questions set forth in
15 TEP-6, would your answers today be the same?

16 A. Yes.

17 Q. No corrections or changes to TEP-6?

18 A. No.

19 Q. On the right screen, we've also shown a couple
20 different slides, PowerPoint slides. You'll be using
21 that as part of your testimony; is that correct?

22 A. Yes, it is.

23 Q. And this is a PowerPoint presentation that you
24 prepared?

25 A. Yes, it is.

1 Q. And the information contained in your
2 PowerPoint presentation, is that developed from
3 information contained in the application or your direct
4 testimony in large measure?

5 A. Yes, it is.

6 Q. And if we deviate from those sources, will you
7 at least note them for the record?

8 A. Yes, I will.

9 Q. And your PowerPoint has been marked as TEP-16?

10 A. Yes.

11 Q. Okay. Let's go ahead and start with the
12 planning process for this project and give the Committee
13 an overview or understanding of that process.

14 A. So utilizing the statutory and regulatory
15 criteria in A.R.S. 40-360.6, we developed a study area.
16 Ed Beck had testified to the original study area that
17 went to South Loop and the revision of that. So using
18 the final study area, which was the revised one after the
19 connection to South Substation had been removed, we then
20 documented the baseline conditions in the study area and
21 conducted the appropriate biological and nonbiological
22 studies.

23 We also engaged the public and stakeholders in
24 an outreach process and developed our alternatives based
25 on the results of the studies, the stakeholder and public

1 outreach, and coordination with the landowners to ensure
2 that the project was compatible with its setting.

3 Q. In terms of how you want to approach the next
4 area of your testimony, do you want to start with talking
5 about the study area or -- okay.

6 A. So, as I said, we had developed a study area.
7 It was the dashed gray line on the slide on the left,
8 which extended a 2-mile radius around where the Sonoran
9 Substation was all the way down to South Loop. That was
10 later revised to be the purple solid line, which is the
11 circle that surrounds all of the alternatives and the
12 substation and the Wilmot Energy Center.

13 So that's where we conducted our studies so
14 that when they discuss the project area in a study
15 report, that's the green -- I'm sorry, the purple line.
16 And then the actual area of the project where the
17 alternatives are, the corridors are, is where they
18 actually walked and did the field studies.

19 So desktop research included the purple. The
20 field work included just the corridors that we plan to be
21 in.

22 Q. Okay. I think it was Mr. Beck, primarily,
23 mentioned about this change in the study area. Can you
24 remind the Committee and me about why there was this
25 change in the study area.

1 A. Originally, in the ten-year plan and at the
2 inception of the project, we believed that we would be
3 having a 138kV line interconnecting from the Wilmot
4 Energy Center-Cisne Switchyard down to our existing South
5 Loop Substation. But studies continued as we -- after we
6 had begun the public and stakeholder involvement process,
7 studies continued in Eric's department, Transmission
8 Planning, and they determined that that connection was no
9 longer necessary. So that part of the project was
10 removed. It was Phase 2 of the project. And so we just
11 now are sticking with what was identified as Phase 1.

12 And that reduced the study area, then, down
13 because we didn't need to study all of the
14 interconnection possibilities down to South Loop
15 Substation.

16 Q. Okay. You mentioned in the prior slide the
17 bullet was establish or determine baseline conditions.
18 Can you talk about that a little bit and how that was
19 done?

20 A. Yes.

21 So when they went out and did the field work,
22 they would look at -- so a biologist went out. They
23 walked the entire corridor of all four alternatives as
24 well as the substation site and switchyard site, and they
25 documented the existing conditions. So was the area

1 disturbed? Were the habitat present for different
2 special status species? Were there Pima pineapple cactus
3 present? What's the existing vegetation like? All those
4 kinds of things.

5 We also had an archaeologist do the same. So
6 an archaeologist walked the entire corridors and
7 determined whether they were historic or prehistoric
8 sites.

9 We did a land use analysis, where we looked at,
10 drove the project area, drove the routes to the extent
11 possible, identified all of the existing land uses in the
12 area. That's what we used as a basis for our land use
13 analysis.

14 We also completed visual simulation. So visual
15 simulation -- an expert went out and selected what are
16 called key observation points where they took photographs
17 of the existing conditions, and then they simulated what
18 the project would look like and overlaid those on the
19 photographs and created simulations of the project.

20 So for all of the different environmental
21 studies, both biological and nonbiological, we went out
22 and established what are the existing conditions. That's
23 basically the baseline condition. And how would it
24 change or be impacted by the project, and we document
25 that in the application.

1 Q. And so that's -- on your next slide. I made
2 you back up. But what you just kind of cataloged --

3 A. Yes.

4 Q. -- are the various biological and nonbiological
5 studies that were performed for this particular project;
6 is that right?

7 A. That's correct.

8 Q. Does it make sense to start, then, with the
9 biological studies? Do you want to walk us through
10 those?

11 A. Yes. As I stated, the biological evaluation
12 was conducted by a biologist, both desktop study and in
13 the field.

14 They looked at what special status species
15 might occur in the project area and what the potential
16 impacts the project may have on that. And then if there
17 was a species potentially occurring there, what the
18 mitigation measure should be for that species.

19 So the initial desktop analysis identified 17
20 special status species. They then did a more detailed
21 screening analysis of those species' habitat requirements
22 and narrowed it down to eight species that could
23 potentially occur in our -- or be impacted by our
24 project.

25 So these are the ones that -- I'm going to go

1 through the slides for each of eight species.

2 Western burrowing owl is the first. It is not
3 a federally listed species in Arizona. It is a resident
4 here. However, it is a Tier 1 species under the Arizona
5 Game and Fish Department regulations. So it's protected
6 by the State. And it can occur in the open areas with
7 scattered shrubs throughout the project area.

8 The survey did not identify any burrows, owls,
9 or sign of owls. However, the habitat is there. So the
10 recommendation for this is that prior to construction, we
11 reconduct the survey, determine whether they are or are
12 not there. And if they are there, we would relocate them
13 off site. City of Tucson has a relocation area in the
14 area of Marana that we could move them to. So that would
15 be the relief if -- in the event that they're there or if
16 they're there at the time of construction.

17 And then --

18 Q. Before you move on, you mentioned a desktop
19 study and then an actual survey.

20 A. Yes.

21 Q. How and when -- describe those and kind of when
22 they're done and how they're used.

23 A. Sure.

24 So for the biological evaluation, the first
25 step is a desktop study. So what they do is they search

1 both U.S. Fish and Wildlife Service as well as Arizona
2 Game and Fish Department's databases. So you can enter a
3 project area. It's very high-tech these days. You put
4 in the boundaries of your area into their tools, their
5 online tools, and then they provide you back a list of
6 species potentially occurring in that area.

7 And then the biologist then looks in detail at
8 each of those species' requirements. What kind of
9 habitat do they need? What kind of plants do they use
10 for forage? What is their known range and elevation,
11 soil types, and all of those kinds of things? And they
12 narrow that very broad list down to something specific
13 that they want to evaluate and that they think may occur
14 in the project area.

15 And then they go out after that, and they go
16 out and actually look at the habitat. And they may
17 further narrow down the list. So I'm not entirely sure
18 when it went from 17 to eight, if it was as a result of
19 the desktop analysis only or if it was a combination of
20 both the desktop and the field work. But they took that
21 list of 17 and narrowed it down by studying that species'
22 requirements and then looking actually in the field as to
23 whether the habitat necessary is present or not present
24 and whether they see actually sign of the species or not.

25 Q. So in this case, with regard to the western

1 burrowing owl, the desktop study indicated that this is
2 potential habitat for the western burrowing owl. Then
3 there was an actual survey done, boots on the ground in
4 the study area where -- actually, the project area.

5 A. Right.

6 Q. And from that survey, it was determined that
7 you didn't find any habitat or any need to relocate; is
8 that correct?

9 A. Incorrect. There was habitat found but no
10 evidence that it was there using the habitat.

11 Q. No actual owls?

12 A. Right, no actual owls. No actual active
13 burrows and no sign, which would be like scat or tracks.
14 So there was no evidence that it was there, but the
15 habitat is there. So there's no way of knowing between
16 now and construction. They could move into the area and
17 form a burrow. And so that's why we would relook again
18 prior to construction.

19 CHMN. CHENAL: Member Woodall.

20 MEMBER WOODALL: Ms. Darling, you've been
21 talking about "we." And I'm assuming that Mr. Beck was
22 not included on these forays of biological studies. So
23 did you retain an environment consultant to do these for
24 you? Who was it?

25 MS. DARLING: Yes. We obtained Tierra Right of

1 Way Services to do the field work for both the biology
2 and the cultural resources.

3 MEMBER WOODALL: I noticed that in the cultural
4 resources segment, Tierra cited as a reference a cultural
5 resources study done by Western Energy Center. So would
6 you happen to know why they would need to do that? And
7 if you don't know, that's fine.

8 MS. DARLING: Can I look and answer the
9 question?

10 MEMBER WOODALL: Sure. Sure.

11 MS. DARLING: Okay.

12 Q. BY MR. DERSTINE: So I guess the next item was
13 the Pima pineapple cactus that everyone got to be -- or
14 who wanted to be close and personal. We did that on the
15 tour.

16 A. Yes. So Pima pineapple cactus is an endangered
17 species listed under the Endangered Species Act, and it
18 is present in the project area. There were 63 separate
19 Pima pineapple cactus occurrences documented within the
20 four corridors and the substation site.

21 All of the Pima pineapple cactus occurrences
22 can be avoided by the transmission line corridors. So
23 any of the transmission line alternatives that are
24 developed, we can avoid by spanning.

25 The substation site itself, two to three of the

1 Pima pineapple cactus are within the grading area.

2 Currently, and just recently, Fish and Wildlife
3 Service has an new position relating to Pima pineapple
4 cactus, and they are allowing transplants. So we will
5 transplant those two to three clusters of Pima pineapple
6 cactus into the buffer area around the substation site.

7 MEMBER WOODALL: Ms. Darling, I just want to
8 say how much I appreciate your going out there early this
9 morning and actually flagging the Pima pineapple cactus
10 for us. And I must also say that they're much prettier
11 in person than they are in photograph. But thank you for
12 that extra effort. I do appreciate it. Thank you,
13 ma'am.

14 MS. DARLING: You're welcome.

15 A couple questions were asked that we were
16 unable to answer on the tour about Pima pineapple cactus;
17 and they're probably irrelevant to the decision, but I
18 can answer them if you like.

19 One was they look like barrel cactus. So just
20 to let you know the way you can tell the difference is
21 that the Pima pineapple cactus, the spines actually occur
22 on individual areoles at the base of the tubercles, so
23 they're -- as opposed to a rib.

24 So the barrel cactus all have ribs, you know,
25 kind of like a saguaro, and all the spines are in

1 clusters along the rib. Whereas, on the Pima pineapple
2 cactus, I know it's hard to see in the photo, each spine
3 is on a individual tubercle that sticks up. And they're
4 not in a row; they're alternating. So it looks really
5 bumpy. I don't know if you noticed they looked really
6 bumpy.

7 CHMN. CHENAL: So -- excuse me. A tubercle,
8 what is that?

9 MS. DARLING: It's the part of the cactus
10 that's, like, sticking up, popping up, right. And the
11 spines are at the tip of it. Yeah.

12 CHMN. CHENAL: Okay. Thank you.

13 MS. DARLING: And there was one other question,
14 if anybody can remind me. Oh, why are they endangered?

15 So why they're endangered, they only have a
16 limited range. They only occur in Pima and Santa Cruz
17 County in the United States and then in northern Mexico.
18 And they have very sensitive soil -- they like only two
19 different kinds of soils, essentially. And they also
20 only bloom one day a year in July, and they're only
21 pollinated by this little, tiny black-and-white-striped
22 bee.

23 So you have to have the bee, you have to have
24 the bee in the right place the one time of the year to
25 pollinate the flower. And then that flower has to

1 actually survive and form the fruit, and fruit then has
2 to find its way -- the seeds within the fruit have to
3 find their way into the appropriate soil.

4 So it's just -- given the limited range and the
5 very specific requirements for it to survive, it's
6 endangered.

7 So, as I said, for this species, what we'll do
8 for the mitigation is we'll transplant those that will be
9 disturbed by grading. We will span any that are in the
10 transmission line rights-of-way, and we will include this
11 in our environmental training for our construction crews
12 and make sure that our environmental monitor keeps a
13 close eye on the remaining 60 that we're not planning to
14 disturb.

15 And then the second species is the desert
16 Sonoran tortoise. It is also no longer protected by the
17 Endangered Species Act. It is protected by Arizona Game
18 and Fish Department Commissioner Order No. 43. And it is
19 a Tier 1A species of greatest conservation need.

20 There is suitable habitat for Sonoran desert
21 tortoise in the northern portion of the project area;
22 however, the foraging habitat is very marginal. In other
23 words, it just doesn't have a lot of variety of annuals
24 and flowering perennials in that area. There's a lot of
25 ground disturbance from those gravel pits and things like

1 that. So there is some, but it's very marginal.

2 And there was no sign of any Sonoran desert
3 tortoise. So we would anticipate that if we see any
4 during construction, they're going to be kind of
5 transient, moving through the area. They will be
6 included in our environmental training, and the
7 construction crews will be provided with Arizona Game and
8 Fish Department's handling guidelines. And we will have
9 the environmental monitor on site as well.

10 Next is the lesser long-nosed bat, which was an
11 endangered species. It's been delisted as of May 2018.
12 I think we talked about this one on our last case. There
13 are saguaros in the project area, which is one of the
14 plants that it forages on, the flowers. So all saguaros
15 that are viable and transplantable, which means they are
16 of a size that they could be transplanted, they're not
17 too large or with too many arms, that would be disturbed
18 by grading, will be transplanted on the substation site.

19 And then within the actual transmission line
20 right-of-ways, we anticipate that we can again span and
21 avoid all of the saguaros there.

22 I grouped these two together because they're
23 very similar requirements, the cave myotis and the
24 Brazilian free-tailed bat. They're both Tier 1B species
25 listed by Arizona Game and Fish Department, so they're

1 not quite as rare or imperiled as the Tier 1 species.
2 They're both insectivus bats. The previous lesser
3 long-nosed bat was a nectar-feeding bat. These are
4 insectivus. So anytime we remove vegetation, we're
5 removing the habitat for the insects that the bats would
6 feed on.

7 So there is an impact there, but it's minor.
8 We will limit, you know, vegetation removal to the extent
9 possible. We're using areas that are previously
10 disturbed. The largest impact will be from the
11 substation site itself because we'll be removing the 12
12 acres for that site.

13 So, really, our only mitigation there is just
14 to minimize to the extent practical.

15 And almost done. Rufous-winged sparrow. This
16 is another Arizona Game and Fish Department Tier 1B
17 species. It is present in our project area and on our
18 substation site. It is a resident in the area. It's a
19 pretty rare species. It's considered a priority
20 vulnerable species by Pima County as well. If anybody
21 read the biological evaluation in detail, they indicated
22 that the removal of the 12 acres of habitat could lead to
23 listing of the species.

24 I was unable to get a formal letter from
25 Arizona Game and Fish; however, I did go in the field

1 with Kristen Terpening with Arizona Game and Fish
2 Department -- she's the habitat conservation
3 specialist -- and we walked, you know, the project area
4 and looked at the habitat. And her response to Tierra's
5 statement was that she did not agree that it would be
6 leading it to listing. She said that the habitat -- and
7 there were no nests. I want to backtrack and say that
8 while the sparrows were present, they didn't find any
9 nests. So she did not feel that the habitat was as great
10 as indicated in the biological evaluation and that, yes,
11 it would be an impact but not lead to listing.

12 And so what we'll be doing here is, again, just
13 minimizing disturbance as much as possible. We'll also
14 do a preconstruction survey to determine if there are any
15 nests, and we'll also make sure that construction does
16 not occur during breeding season if there are any nests
17 that would be in proximity to construction.

18 And last is the Tumamoc globeberry. This is a
19 Pima County priority vulnerable species also. It's found
20 adjacent to and within the floodplains of minor washes.
21 We did not detect any Tumamoc globeberry; however, they
22 are really cryptic and hard to identify. And they are
23 best surveyed for when they're blooming or when the
24 berries are on the plant, which is actually right now,
25 this time of year.

1 We are planning to span all the washes with the
2 transmission line, and the substation also does not
3 impact the floodplain of the wash that goes on either
4 side of the substation site.

5 So we don't anticipate any impacts. We will,
6 again, survey prior to construction and then include it
7 in our environmental monitoring plan.

8 This is a good break of the end of my
9 biological discussion.

10 Q. BY MR. DERSTINE: So that -- what you just
11 covered there with all the slides of the globeberry and
12 the bats and the sparrow, those are the studies that were
13 performed that you would characterize or group as your
14 biological studies; is that right?

15 A. That's correct.

16 Q. So the transition point that this slide is
17 making is then there were a lot of nonbiological studies
18 that were performed. Why don't you identify those.

19 A. Sorry. Yes. Also nonbiological studies we
20 conducted was the land-use analysis.

21 We looked at whether there were any scenic
22 areas in the project area and conducted visual
23 simulations. We looked at the potential impacts to
24 recreation, to historic and archeological sites, noise
25 assessment, and then a Federal Aviation Administration

1 analysis.

2 And I will not be covering land use this time.
3 Ms. Rucker will cover that in her testimony, but I will
4 cover the remainder of the nonbiological studies.

5 Q. Let's start, then, with the scenic areas, and
6 this involves the simulation of the project at different
7 KOPs or key observation points; is that right?

8 A. Yes. First, I would like to say that there are
9 no designated scenic areas in the project area or the
10 study area for that matter.

11 However, there are long-range views from the
12 project area, from the substation site, to all four major
13 mountain ranges in Tucson: North to the Catalinas, to
14 the Rincons, the Santa Rita, and the Tucson Mountains. I
15 don't know if you noticed that on the bus ride, that
16 there were some good long-range views.

17 So as a result of that, we had a visual
18 resource specialist go to the project area and identify
19 the 12 key observation points that are identified on the
20 map on the left, which is the -- each one is the circle
21 with the number in the center in black as each of the key
22 observation points.

23 And from each of those points, a simulation of
24 the project was done for each -- for all four
25 alternatives, Northern 1, Northern 2, Southern 1 and

1 Southern 2.

2 Q. Let me interrupt you for a minute.

3 A. Yes.

4 Q. How are the key observation points selected?

5 How did you decide where to create the simulation?

6 A. So, again, the visual resource specialist makes
7 recommendations. And then we narrow them down because
8 usually they give us 10 times more than we feel is
9 necessary, so we work with them to identify. But,
10 usually, it's where the project is going to be -- at
11 least one point in every area where the project is most
12 visible from.

13 Q. Or where it may have more traffic or --

14 A. Yes. So at intersections from the middle of
15 the residential area or if there's any concerned
16 landowners from their area, looking out or in.

17 Q. Okay. Thank you.

18 A. And then so I have a number of visual
19 simulations that I can describe.

20 Q. Now, let me --

21 A. Yes.

22 Q. Just for the record and for context, are all of
23 these visual simulations that you're going to be showing
24 on the screens before the Committee, are those contained
25 in the application?

1 A. Yes. They are all in Exhibit G-7 or 8. Sorry.
2 Let me check.

3 CHMN. CHENAL: I think it would be helpful to
4 have it on one side of the screen where the observation
5 points are and give us a chance, when you're describing
6 it, Ms. Darling, to get our orientation.

7 MS. DARLING: Sure.

8 It is G-7, just to be clear.

9 So the first one that you see is from Key
10 Observation Point 1, and we're looking over here. We're
11 looking south. So this is the existing condition. This
12 is where we stopped this morning when you saw the two
13 lattice towers that Ed described on the right here. So
14 this is Swan Road looking south.

15 So the change is that these two lattice towers
16 here become monopoles. But then, for the Northern 1
17 alternative, you have the addition of all of these poles
18 running from the south side of Old Vail south along the
19 east side of Swan Road. So that's the change.

20 The change is still considered minimal, though,
21 given the relation of the project to its setting in that
22 there are existing vertical structures already there, and
23 we're kind of adding to it but not to the extent that
24 there's even a moderate or major change.

25 Q. BY MR. DERSTINE: Ms. Darling, when you say the

1 change is considered or the impact is considered
2 moderate, that is the --

3 A. Minimal.

4 Q. Minimal. That's the label that the visual
5 specialist has placed based on their judgment and
6 experience. I think we would acknowledge that the
7 Committee can make their own judgments about the degree
8 of impact --

9 A. Absolutely.

10 Q. -- and what we're trying to do is show them a
11 simulation of what the project would look like at these
12 various points. It's less important for them to
13 understand or hear what label has been affixed to it. Is
14 that a fair statement?

15 A. Absolutely. And I can leave labels off if
16 you'd like.

17 Q. I think it's fine to give reference.

18 A. Okay.

19 MEMBER WOODALL: I just wanted to ask, did the
20 visual specialist use -- because I know the different
21 federal agencies have different standards that they use.
22 Is this one that they relied upon, or is this just their
23 personal judgment? And if you don't know, that's fine.
24 It's not vital for me.

25 MS. DARLING: I'm assuming that he used the

1 Bureau of Land Management's because that is what I have
2 indicated in contracts for him to do.

3 MEMBER WOODALL: Okay.

4 MS. DARLING: But I don't know that he
5 specifically stated that he did this time.

6 MEMBER WOODALL: That's fine. That answers my
7 question. Thank you very much, Ms. Darling.

8 MS. DARLING: Thank you.

9 So this is a visual simulation of the
10 Northern 2 Alternative from KOP 2, which is right at the
11 intersection of East Old Vail Connection Road and Swan
12 Road.

13 So this is, again, where we stopped and looking
14 along Old Vail east. This is the south side of the
15 right-of-way, this is the existing distribution pole, and
16 this is the existing lattice going back when we drove the
17 tour this morning. It was the last stopping point, site
18 No. 5, I believe.

19 And this is the simulated condition. These are
20 the two monopole lines that would be on the south side of
21 the road going back. And then the third one joins up
22 back here in the background. And that, too, was labeled
23 as a minimal change.

24 CHMN. CHENAL: Member Haenichen.

25 MEMBER HAENICHEN: Did you do Northern 2

1 Alternative from 1, just so we can compare apples and
2 oranges?

3 MS. DARLING: Member Haenichen, yes, we did.
4 It's in G-7. All of the -- each KOP has a simulation of
5 any alternatives that could be viewed from that KOP, and
6 they're all contained in G-7. I just selected a few to
7 show.

8 MEMBER HAENICHEN: Thank you.

9 MS. DARLING: So this simulation is from KOP 3,
10 which is here, which is directly west of where the
11 substation site is planned for the Sonoran Substation.

12 So it's looking eastward. This is the existing
13 view. Mainly, the only thing that you can really see is
14 the existing distribution line. The addition here is of
15 the substation. Those taller structures are the static
16 masts. And then this is the Northern 2 line coming in,
17 and this is the Southern 1 line coming out.

18 So this is actually our preferred both for the
19 Northern and the Southern shown in connection with the
20 substation. And this was coined as moderate change
21 because of the addition of the vertical structures
22 against the skyline.

23 This is KOP 8. Sorry. Here's KOP 8, which is
24 just on the west side of Swan Road. And we are looking
25 north towards the Southern 1 Alternative. And you can

1 see the Sonoran Substation on the east side of Swan Road
2 and then the Southern 1 going up the west side of Swan
3 Road before it will then cross over into the substation.

4 So there's the existing distribution line that
5 we saw. And this was also coined as a moderate impact
6 due to its proximity to resident viewers and the addition
7 of the poles on the west side of Swan Road.

8 CHMN. CHENAL: Ms. Darling, can you point your
9 laser on the screen on the left where the Cistern
10 Switchyard would be located?

11 MS. DARLING: Here's Cisne Switchyard. It's
12 the yellow triangle. And then this is 8, and we're
13 looking north on this simulation toward -- to this -- I'm
14 sorry, yeah, this way. And then the substation is way up
15 here. That's where you see it from 8. It's quite a
16 distance from the KOP to the substation. But you can see
17 the -- all along the west side of Swan here. And these
18 poles, as you go back, are Southern 1.

19 CHMN. CHENAL: Okay. I'll be nitpicky, but the
20 Cistern Switchyard on the screen on the left -- Cisne.
21 Am I saying Cistern? Oh, my gosh. Cisne. Yo hablo
22 Español.

23 Cisne is a little west of where it's depicted
24 on the placemap, so --

25 MS. DARLING: You're right. You are correct.

1 It was -- when the KOP map was created, that
2 was the location of Cisne, and it was moved to be on the
3 east side of Wilmot Road if -- I'm sorry, Swan Road if
4 Swan Road were to extend beyond the cul-de-sac. So that
5 map was not updated. I apologize.

6 CHMN. CHENAL: So the placemap is more accurate
7 is what I'm getting at?

8 MS. DARLING: That is correct.

9 CHMN. CHENAL: And one more question. When you
10 refer to the level of the visual impact, of moderate, for
11 example, those are terms of art, are they not?

12 MS. DARLING: Yes. I mean, they're terms
13 coined by a visual resource specialist for identifying
14 the levels of impact of a project on the scenery.

15 CHMN. CHENAL: Right. But there's some, I
16 guess, standards or something that they refer to that
17 informs them of which degree of impact to use?

18 MS. DARLING: There's a scaling, yes.

19 CHMN. CHENAL: Thanks.

20 MS. DARLING: Okay. This is a view from KOP
21 11. Here's 11, which is actually --

22 My apologies. 11 is at the end of Swan Road
23 looking south towards -- and this visual simulation was
24 updated, so it is in the correct location for the
25 placemat map, not the KOP map.

1 CHMN. CHENAL: So we're looking south?

2 MS. DARLING: I'm sorry. That's incorrect. I
3 was right the first time.

4 This is KOP 11, which is in the neighborhood
5 looking towards where the Southern 2 line would come
6 around the corner and make a 90-degree to head back west.

7 Q. BY MR. DERSTINE: Let me -- the slide on the
8 right shows KOP 10, so you might want to show the point
9 on the map on the left from 10.

10 A. Sorry, people are talking in my ear, and I'm
11 listening. I shouldn't -- I got turned around. So 10
12 and then 11 we'll talk about.

13 So 10 is where I said. It's right -- I said
14 11, and I meant 10. My apologies.

15 10 is looking south at Cisne Switchyard and at
16 the Wilmot Energy Center, which is really not very
17 visible because it's at ground level behind the
18 vegetation.

19 And then this is the turning structure for
20 Southern 1 Alternative to go into the switchyard. And
21 that was considered the highest impact because of the new
22 solar -- the switchyard and the poles and in the area
23 where -- as you can see in the existing condition photo,
24 there's really no development except in the very far
25 background with the existing 345 lines.

1 And he said the highest impact of all of the
2 visual simulations. I don't know that he necessarily
3 meant it was a high impact, but this was the greatest --
4 the view that was most impacted from all of the views.

5 And then last is KOP 11, which is the one
6 that's within the neighborhood right here, and it's
7 looking kind of southeast at the 90-degree turn. And you
8 can see, again, a higher impact with the addition of
9 poles where there are none.

10 Q. So is that -- those are the simulations, the
11 KOPs that you pulled from the application as part of your
12 testimony today. As you mentioned, the remainder of all
13 the KOPs that were analyzed or the simulations are
14 contained in the application, right?

15 A. Correct.

16 Q. So then the next area of study --

17 CHMN. CHENAL: Excuse me, Mr. Derstine. Member
18 Hamway has a question.

19 MR. DERSTINE: Oh, I apologize.

20 MEMBER HAMWAY: I think I know the answer to
21 this. So the studies that you've done for the study area
22 of the project, are the same studies done when you create
23 the Sonoran Substation through the City of Tucson? And
24 how about the Wilmot Energy Center where the solar arrays
25 are going to be, the 1,000 acres? So are there similar

1 studies done for those projects?

2 MS. DARLING: That is correct. For the Sonoran
3 Substation, they had all of the same studies completed.
4 And they're contained in what's called a Special
5 Exception Land Use Permit application. And it also has
6 its own notification process that's contained in a
7 notification report that goes along with that
8 application.

9 For the Wilmot Energy Center, it's actually
10 within what's called a solar zone, so it's a specific
11 zoning for the City of Tucson. And because of that,
12 they're not required to go through the special exception
13 land use process. But they have done -- NextEra has done
14 all of the same studies, even though they're not required
15 to provide those with their development plan.

16 MEMBER HAMWAY: So you said that the 12 acres
17 for the substation might change the status of one of
18 the -- I can't remember, was it the bat? I'm not sure.
19 It doesn't really matter.

20 So my question is, do they aggregate all of the
21 studies to be a larger study area? So, I mean -- I don't
22 understand why your 12 acres might affect the
23 lesser-known bat, or whatever the name of it was, versus
24 the other studies. So that's why I was curious, are they
25 all put together to determine species endangerment? And

1 it doesn't really have any relevance. I was just
2 curious.

3 MS. DARLING: Right. So as -- how to put. I'm
4 sure they don't -- it was the rufous-winged sparrow.

5 So for the rufous-winged sparrow, based on what
6 they know -- I'll just use Tierra Right of Way Services'
7 biological evaluation as an example. Even though Arizona
8 Game and Fish Department didn't end up agreeing with
9 them, they took a conservative approach, which is
10 typically what a consultant would do because they don't
11 want to make assumptions that then, you know, make them
12 look bad if Arizona Game and Fish doesn't agree with them
13 in the opposite direction. Right?

14 So their conservative approach was we know that
15 there are X number of rufous-winged sparrow habitat --
16 acres of habitat for rufous-winged sparrow within their
17 range. I don't know what that number is, but X number.
18 And your 12 acres, by removing those 12 acres, reduces
19 that number of acres to a point that would cause it or
20 could cause it to become a listed species. How they make
21 that exact determination or what percent it is, I don't
22 know. But Arizona Game and Fish Department, in the end,
23 didn't agree with that.

24 If Wilmot Energy Center also has rufous-winged
25 sparrow habitat on their project and they're removing

1 some additional number of acres and that was added to our
2 acres, could it then cause the trending towards a federal
3 listing is the question. And that is Arizona Game and
4 Fish Department's job to determine at what point does
5 that species -- do we need to do more mitigation or is
6 there a potential to cause that species to be listed.

7 So, again, in respect to our -- I know
8 NextEra's project is one that we're interconnecting with,
9 but, one, I don't know if they have habitat for
10 rufous-winged sparrow there; and, secondly, I don't know
11 whether their disturbance cumulatively with ours would
12 cause a listing. Arizona Game and Fish Department did
13 not seem concerned, so I don't believe so.

14 And at some point, though, they have to decide
15 whether or not -- you know, there's mitigation that needs
16 to be done that would maybe provide a new habitat
17 somewhere else or something like that. I'm not sure.

18 Did I even answer your questions?

19 MEMBER HAMWAY: Yeah. It just seems because
20 there's so many jurisdictions authorizing the permitting
21 and the -- we've got us, there's City of Tucson,
22 there's -- I just was confused on how all of these
23 reports get aggregated, you know, put together to look at
24 the whole totality to see if there's any, and maybe they
25 don't.

1 MS. DARLING: Well, I think that's why it's
2 important to include Fish and Wildlife Service and
3 Arizona Game and Fish Department, for example, in our
4 scoping. Because any project that includes them in their
5 scoping, they get the reports. And they are able to then
6 keep track of what's going on in the development world
7 and where a habitat is being removed and at what point
8 they need to maybe pay more attention to a specific
9 species or not.

10 MEMBER HAMWAY: Thank you.

11 Q. BY MR. DERSTINE: So moving on from the visual
12 impacts, I think the next area of analysis was the
13 potential impact on recreational use within the project
14 area.

15 A. Hold on. I'm finding my place again.

16 Okay. Sorry.

17 So we did look at recreation and whether the
18 project would have an impact on recreation.

19 There is only one park in our study area. It's
20 located on the far left side here, so we do not believe
21 that the project will have any impact on that.

22 As a -- with respect to passive recreation, all
23 of the land in the project area is private and,
24 therefore, it is not available to the public for
25 recreational use. So the project will not have an effect

1 on recreation.

2 Q. And potential impacts on historic or
3 archeological sites and structures?

4 A. So Tierra Right of Way Service, as I stated
5 earlier, did do a survey of the four alternatives as well
6 as the substation site. And eight -- I'm sorry, one
7 previously identified site and seven new sites were
8 identified. They're shown in the map on the left in the
9 sort of a pinkish-red color.

10 There's one site -- I'm just going to mention
11 this -- in the substation. There's one site that we had
12 to do testing on, and it's within the substation site.
13 So that site has been tested, and we're awaiting
14 clearance from the State Historic Preservation Office to
15 proceed with grading once we have our permits of the
16 substation site.

17 There was a previously identified site on the
18 Southern 2 Alternative that would not be able to be
19 avoided if we were to build this alternative, the
20 Southern 2 Alternative. That site was tested previously
21 during the prison expansion project. So this prison,
22 when they expanded -- and I'm not quite sure why they
23 tested a site all the way down here, but they did. This
24 site was tested, and it was exhaustively tested. So
25 while it still is a national register site, if we were to

1 build the project, we would not be required to do any
2 additional testing there. We could place the poles in
3 the site without any additional work required.

4 The remaining sites are all small enough that
5 they could be spanned by any -- construction of any of
6 the alternatives.

7 Q. When you would say "a site," can you give us
8 some sense of -- are we talking about artifacts or what
9 sort of -- what is a site?

10 A. A cultural site is either historic, greater
11 than 50 years old, or -- well, so prehistoric sites are
12 also greater than 50 years old, but they contain
13 different artifacts.

14 So it has to be either a -- in order to be a
15 site, it either has to have a certain number of the same
16 type of artifact. So, for example, ceramics, pottery.
17 It has to have greater than a certain number of actual
18 artifacts in order to be a site. I think it's greater
19 than ten. Or it has to have a variety. So it could have
20 maybe one ceramic sherd and one arrowhead and one of
21 another type of artifact. It could also be considered a
22 site, even though there's only three artifacts there.

23 So what they do is once they identify -- when
24 an archaeologist is surveying, they identify an
25 arrowhead, they then circle around the arrowhead and keep

1 looking for artifacts -- more and more artifacts until
2 they don't find anymore artifacts. That becomes your
3 site boundary. That's how you determine -- that's how
4 you find a site.

5 And if it's less than the number required, it's
6 called an isolated occurrence. So it's still documented
7 and logged and recorded, but it doesn't constitute a
8 site.

9 Q. And this information of existing sites that are
10 shown on the screen on the left, is that something that's
11 available online or from some sort of database?

12 A. No. Those are actual sites that they -- except
13 for the big one that I talked about. So the -- this one
14 is an existing site. And yes, that's available in the
15 Arizona State Museum database.

16 So when you conduct what's called a Class I
17 investigation, that's a desktop survey where you get the
18 data from Arizona State Museum of all the known sites in
19 your project area. And only specific individuals can
20 acquire that information. They have to have a permit
21 from the Arizona State Museum to do so.

22 And then the remaining six sites that you see
23 there were sites that they actually identified during
24 their field work. So they walk 10-meter transects up and
25 down the entire project area. And then when they find an

1 artifact, they then walk the circle until they find the
2 site boundary, and that's how they come up with that.

3 Q. And the "they" are the environmental
4 consultants, Tierra Right of Way?

5 A. Correct. Tierra Right of Way Services.

6 CHMN. CHENAL: Yes. Member Hamway.

7 MEMBER HAMWAY: So will the new sites that your
8 guys found, will they be added to the database?

9 MS. DARLING: That is correct. So as part of
10 the permit requirements, they must submit GIS files of
11 those site boundaries back to ASM and documentation of
12 their survey boundaries as well. So when you run that
13 Class I desktop survey, you actually get -- you also get
14 back the boundaries of all of the previous surveys
15 conducted within whatever distance you request of your
16 project area. Usually, it's within 1 mile of your
17 project area. And that is contained in the application,
18 the map.

19 Any locational maps like the one on the left
20 where it actually shows where a site is, those maps are
21 required to be redacted from what we file because they
22 cannot be seen by -- I mean, obviously in this context,
23 it's okay. You're not going to remember tomorrow where
24 that is. I wouldn't. But they can't be published for
25 public -- you know, you can't put it in a library and

1 have a map so somebody can go and find the site and then,
2 you know, dig up anything that's subsurface there. So
3 that's why you might see maps have been redacted from a
4 cultural resources report.

5 CHMN. CHENAL: In light of that, Ms. Darling,
6 should we exclude what's on the screen on the left from
7 the exhibit -- supplemental exhibit that's going to
8 capture the screens?

9 MS. DARLING: I actually included it in my
10 PowerPoint. It says specifically "map redacted." So if
11 you look in the filing -- filed version of my
12 PowerPoint -- because the map is actually -- it looks
13 like this.

14 CHMN. CHENAL: Right. But I've asked the
15 applicant to compile the screenshots on the left screen
16 that have not been introduced into the record and
17 collectively will name that as an additional exhibit.

18 MS. DARLING: That should be redacted.

19 CHMN. CHENAL: I'm thinking that that should be
20 redacted from the group that we have discussed
21 previously.

22 Yes, Member Haenichen.

23 MEMBER HAENICHEN: I'm just curious, when the
24 people do these surveys and they find artifacts, what do
25 they do with them?

1 MS. DARLING: So at the time of what's called
2 the Class III survey -- so the Class I survey is where
3 they went online and they got all the data.

4 The Class III survey is where they actually go
5 in the field and survey. At that time, they document the
6 location with a GPS unit, and they leave the artifacts in
7 place.

8 It's only at the time that you go and do any
9 kind of testing or data recovery of a site that you
10 collect the artifacts. The artifacts are collected and
11 then put in the Arizona State Museum. They have archives
12 there.

13 And these days, they're doing a limited
14 collection because we're running out of space. They've
15 been collecting artifacts since the '70s. And if you
16 ever go to ASM here in Tucson, there are literally
17 stacked to the ceiling boxes and boxes and boxes in a
18 room bigger than this to a ceiling bigger than this,
19 boxes of artifacts. Some of them just contain bottle
20 glass, cores of rocks, you know, that had chips.

21 And so they're getting very picky about what
22 they actually require you to collect these days. So it
23 would be something called a diagnostic artifact is what
24 you would collect, and the rest you would leave on the
25 ground. And a diagnostic artifact is one that can

1 pinpoint you to a specific time or use or region.

2 MEMBER HAENICHEN: Do they occasionally find
3 what I might call an extraordinary artifact?

4 MS. DARLING: Oh, yeah. I actually worked as a
5 an archeologist for five years, and I found a bear --
6 carving of a bear into a pendent from a shell from the
7 Gulf of Mexico here in Tucson. So there's some pretty
8 cool stuff out there in the world.

9 MEMBER HAENICHEN: Thank you.

10 Q. BY MR. DERSTINE: The only question that occurs
11 to me on this issue on the archeological sites is you
12 mentioned TEP will utilize a monitor for the endangered
13 species and monitoring impacts and if there's any new
14 habitat that's discovered at the time of construction.

15 How are these archeological sites and these
16 issues handled through the construction phase?

17 A. So we have construction period maps that we
18 provide to the crews, and we also have an environmental
19 monitor on site during construction. The construction
20 maps don't show the specific site boundaries, but they
21 kind of give like a larger buffer around them, a circle
22 that says "avoid this area." So those areas are also
23 flagged in the field, and the monitor ensures that they
24 don't go into them.

25 Q. Thank you.

1 So I think the next area is noise impacts.

2 A. So noise impacts are anticipated to just be the
3 typical short-term construction noise that you would have
4 during the building of the transmission line and the
5 substation. It's anticipated to be temporary in nature,
6 with it only being in one location for maybe a couple
7 days at a time. And no long-term impacts are anticipated
8 from the maintenance or operation of the line.

9 Q. Okay. And then there was some FAA analysis.
10 And I want -- I'm going to, as your lawyer, caution you
11 to be very careful here because I think the entire
12 Committee may be experts in FAA issues at this time given
13 the last case. And we've got a TAA expert here too.

14 But why don't you talk about the sort of
15 analysis that was done for this project given its
16 proximity to the Tucson Airport.

17 A. Okay. Sure. So we use data that's available
18 from the City of Tucson. The City of Tucson actually has
19 some zoning layers associated with Tucson International
20 Airport that you are required to look at when you're
21 building a substation, for example. And so those are
22 overlaid on this map that you see.

23 So the gray underlined lines are the Tucson
24 Airport -- International Airport runway, and the blue
25 represents what they call the departure zone. And the

1 green -- I'm sorry. I should be using this.

2 So the blue is this line with the triangle,
3 which they absolutely don't want you to put anything in.

4 And then they have these green lines that go
5 out. This is called the Hazard District. And associated
6 with it, they have heights. So I know it's really hard
7 for you to see, but there's heights along these lines
8 that run sort of in a northeasterly to southwesterly
9 direction.

10 So, as you can see, all of our alternatives are
11 within the Airport Hazard District. And if you look at
12 the worst-case scenario, which is this point where we tie
13 into our existing system -- I know it's hard to read, but
14 it says 200 to -- I'm sorry -- 220 to 240. So that's
15 kind of our worst-case height. We wouldn't want to be
16 higher than 220 feet at that location.

17 So, as you know, in the application, it states
18 that our poles are 75 to 120 feet on average and that our
19 worst-case scenario would be 199 feet. And that would be
20 in the event, for example, the Sonoran Corridor came
21 through and had a raised bed or something like that.

22 So this is -- again, this is just our initial
23 preliminary analysis. We are required by the Federal
24 Aviation Administration to also submit to them
25 Form 7460-1. For each of the pole locations, we enter

1 its height and its latitude and longitude into the online
2 tool, which is that form. It's called the Notice of
3 Proposed Construction or Alteration.

4 So we have done that for all of our
5 alternatives. We've entered all of our preliminary pole
6 locations and their heights as determined and seen in the
7 Google fly-through. But we have not received a response
8 back from FAA yet. It generally takes greater than -- 60
9 days or more to get a response from them.

10 But based on City of Tucson's database and
11 their information, we do not anticipate any impacts. And
12 we have been working closely with Tucson Airport
13 Authority, and they have not indicated any concerns. And
14 as you saw with the existing lattice towers, they're much
15 taller than our average height of our new monopoles. So
16 I don't anticipate any issues with FAA.

17 CHMN. CHENAL: And, to be clear, what we're
18 looking at on the screen, the green lines --

19 MS. DARLING: These.

20 CHMN. CHENAL: -- are City of Tucson zoning
21 requirements, for lack of a better word, as opposed to
22 federal FAA requirements?

23 MS. DARLING: Correct. But City of Tucson did
24 work in conjunction with Tucson International Airport to
25 develop the Airport Hazard District as a zoning layer for

1 City of Tucson zoning. So I'm sure it's closely
2 correlated with the Federal Aviation Administration, but
3 I can't say that it is the same.

4 CHMN. CHENAL: Okay. Thank you.

5 Q. BY MR. DERSTINE: Does that cover the
6 biological and nonbiological studies, other than land
7 use, which Ms. Rucker is going to testify to, that were
8 performed for this project?

9 A. Yes, it does.

10 Q. So I think the next area is going to be -- you
11 were going to cover the stakeholder involvement for the
12 project. So why don't you do that now.

13 A. Yeah. So I normally cover the public and
14 stakeholder involvement; however, Ms. Rucker will be
15 covering the public involvement. Just so you know, I'm
16 just going to cover the stakeholder.

17 We did have two stakeholder meetings. Those
18 were noticed to all of the individuals listed in Table 8
19 of Exhibit J, which are three pages long, but I included
20 22 different organizations or jurisdictions.

21 So of those, at the first meeting, we had ADOT,
22 Arizona Game and Fish Department, Pima County, City of
23 Tucson, Tucson Airport Authority, and then also NextEra,
24 and Diamond Ventures, which is South Wilmot Land
25 Investors -- an LLC under Diamond Ventures, sorry.

1 And in addition to the -- and then the second
2 stakeholder meeting was held -- sorry. It should be the
3 date. I don't have the date. I'm sorry. It was right
4 after the -- it was right after the prefiling hearing
5 when we determined that there was a concern with Pima
6 County. So the very next Monday, we had a quick
7 stakeholder meeting, and NextEra, South Wilmot Land
8 Investors, Tucson Airport Authority, and Pima County
9 attended that stakeholder meeting. And that's when we
10 tried to solve the problem about the Northern 1
11 Alternative.

12 CHMN. CHENAL: Member Hamway has a question.

13 MEMBER HAMWAY: So Mr. Beck stated yesterday
14 that the notice area was -- went out to the entire -- to
15 the original site. So for these stakeholder meetings,
16 were everyone in that original oval sent to?

17 MS. DARLING: That's correct. So, for example,
18 the Town of Sahuarita was noticed in the first outreach,
19 but they weren't removed for the second outreach.

20 And the reason we decided to maintain the same
21 notice area was we didn't want people to be wondering,
22 What happened to that project that I got noticed about?
23 And this way, they could read the second newsletter that
24 identified that South Loop was no longer part of the
25 project and, therefore, we weren't going to be extending

1 that far to the southwest.

2 Q. BY MR. DERSTINE: So I think Mr. Beck has
3 already testified to some extent in terms of how the
4 stakeholder involvement and stakeholder preferences,
5 namely, TAA and South Wilmot Land Investors to some
6 extent, drove the preferences that the company's
7 preferred route would be brought forward, but why don't
8 you cover that again and talk through how the input and
9 the feedback from stakeholders was taken into account for
10 the process.

11 A. So when we had developed the first outreach,
12 newsletter one, and the first public meeting, all of
13 the -- there were six alternatives that got us from the
14 Sonoran Substation to the South Loop Substation -- to the
15 existing South Loop Substation.

16 However, all six of those alternatives, at the
17 point where the project is now, were in the exact same
18 location. So we only had Swan Road as an alternative.
19 So, for the first, you know, three months of the
20 project's life, it was Swan Road to get from Sonoran --
21 from our existing system to Sonoran Substation to Cisne.
22 And from there, we had six different alternatives to get
23 to South Loop.

24 So when we then reduced the project down to
25 just being the smaller study area and it just being

1 between our existing system and Cisne, we had one
2 alternative, which was Swan Road alignment. And we were
3 also having -- starting, then, having discussions with
4 Tucson Airport Authority.

5 By then, we had met with South Wilmot Land
6 Investors, and so we had more information from the
7 landowners. And as a result of that, Northern 2 came
8 about. And, actually, Southern 2 came about as well as a
9 result of that outreach with the landowners.

10 Does that answer your -- do you want me to go
11 into more detail?

12 Q. No. I think that gives some context in terms
13 of -- and adds something to what Mr. Beck testified to.

14 I guess what I was looking at and what I would
15 like you to address is in our last case, Irvington to
16 Kino, we spent a fair amount of time talking about
17 geospatial analysis, the micro, the macro, and the
18 sensitive receptors --

19 A. And everybody loved it so much.

20 Q. -- and that's not a part of this case. And my
21 question is why, and why was it not used here?

22 A. Okay. Well, looking at the project and its
23 location and given that it's very linear in nature, we're
24 going from our existing system to the Sonoran Substation
25 to the -- it's a straight line; correct? And it's also

1 got two major landowners, Tucson Airport Authority and
2 South Wilmot Land Investors.

3 The difference there is that Irvington to Kino,
4 there were numerous different ways we could get from
5 point A to point B. In fact, I think there were 48
6 different segments that we could connect in immeasurable
7 numbers in ways to get from point A to point B. And
8 so -- and there were a lot more people -- both people and
9 stakeholders that could be affected by the project. So
10 in order to take a less biased approach, we used the
11 geospatial analysis.

12 Now, in this case, we have two major landowners
13 that will be granting us easements to place the line, and
14 so it's very important -- the environment is important,
15 the residents in the area are important, but the
16 landowners are important as well. And so we didn't feel
17 the need for a geospatial analysis, but we did look at
18 all of the same resources we would normally look at as
19 part of that analysis and determine that, irrespective,
20 they're pretty equal. You know, we have the similar
21 impacts to the species, to cultural resources, to visual
22 resources. So there wasn't one or the other -- one
23 reason or another not to agree with what the landowners
24 ultimately wanted.

25 Q. Okay. So for the right case, the geospatial

1 analysis, the members of the Committee may see that again
2 from us; but it's not a cookie-cutter approach and it's
3 not used and employed in every case, it's not a valuable
4 tool?

5 A. It's a valuable tool when it's used in the
6 right case. This wasn't -- it would have just been
7 icing.

8 Q. All right. I think the next -- shifting gears
9 to kind of the next topic --

10 CHMN. CHENAL: This might actually --
11 Mr. Derstine, this might be a time to take a 15-minute
12 recess.

13 MR. DERSTINE: I'm happy to do that, although I
14 think I've just got the signs, and then Ms. Darling is
15 done. But we can break now, and I'll do it after the
16 break.

17 CHMN. CHENAL: Yeah, I think -- what would be
18 the Committee's preference? Let's take a break. Let's
19 take a 15-minute break, and then we'll come back and
20 finish up with Ms. Darling. And then we can start with
21 Ms. Rucker.

22 (A recess was taken from 3:49 p.m. to
23 4:22 p.m.)

24 CHMN. CHENAL: If we can take our seats, and
25 we'll resume. That was a nice little break here, but we

1 have to continually compliment the food that's being
2 offered. Maybe I shouldn't put that on the record, but I
3 just did.

4 (Laughter.)

5 CHMN. CHENAL: But we're not bribed by that.

6 MEMBER JONES: Maybe a little.

7 CHMN. CHENAL: So I think, Mr. Derstine, you're
8 going to finish up with Ms. Darling and then move on to
9 your next witness.

10 So unless there are any procedural matters we
11 should discuss beforehand, please proceed.

12 MR. DERSTINE: Thank you.

13 Q. BY MR. DERSTINE: Ms. Darling, I think right
14 before the break, I had finished up talking through the
15 stakeholder involvement and kind of how the alternatives
16 and the preferred routes for this project were, to some
17 extent, driven by the preferences of the landowners, the
18 two primary stakeholders, Tucson Airport Authority and
19 South Wilmot Land Investors.

20 So now, changing topics, unless you have
21 anything more you wanted to add on that, I wanted to talk
22 a bit about the -- let's start by talking about the signs
23 that were posted.

24 We're required to post signs. I think we saw
25 one of the signs on the route tour this morning. And why

1 don't you talk about how the Notice of Hearing signs were
2 posted and when, etc.

3 A. The Notice of Hearing signs were posted on
4 August 23rd, 2018, in the four locations that were agreed
5 to in the prehearing conference, and they are
6 contained -- there's a map and pictures of that in
7 Exhibit TEP-10.

8 Q. I asked Patrick if he can pull that up and just
9 show exactly where signs were posted.

10 A. Okay. While he's looking, I can start.

11 There was one posted at the corner of Old Vail
12 Connection and Swan Road.

13 One posted on Old Vail where the Northern 2
14 Alternative turns south that we stopped the bus there,
15 and you can see it at that point.

16 One was posted at the end of Mouse Trail. We
17 saw that when we came back out to make the left onto
18 Swan.

19 And there's -- I believe -- we need the sign.
20 But I think it was at the end of Swan Road in the
21 cul-de-sac.

22 CHMN. CHENAL: Member Hamway.

23 MEMBER HAMWAY: So in our CEC, we talk about
24 signage, and we say they have to be a half a mile apart.
25 So how does this correlate with what we're going to say

1 when we do this?

2 I mean, I know you've got signs now. But when
3 you start construction, the CEC says you need them every
4 half mile, and we have all the -- you know, all the stuff
5 on it. So what determines placement on this? Just your
6 best judgment?

7 MS. DARLING: We recommended the locations
8 based on what we know about the project, and then that
9 map was presented at the prehearing conference and agreed
10 to by the Chairman.

11 MEMBER HAMWAY: Okay.

12 CHMN. CHENAL: Yes. At the prefiling
13 conference, actually --

14 MS. DARLING: Prefiling, sorry.

15 CHMN. CHENAL: -- we reviewed that, and we put
16 that on the record and kind of review different
17 possibilities and where it makes the most sense. And so
18 these are -- that's a typical item that we review at the
19 prefiling conference.

20 Member Woodall.

21 MEMBER WOODALL: I was just going to say that
22 I'm not such a big fan of posting them every half mile,
23 particularly when you can't read them. So when we get to
24 deliberations, I will have some choice words.

25 CHMN. CHENAL: We're actually going to be

1 discussing that in the course of Ms. Darling's testimony
2 because I think one of the upcoming slides raises the
3 issue.

4 MS. DARLING: Looks like I was mistaken.
5 There's not one -- well, there is one on the cul-de-sac.

6 No, I was correct. I'm sorry.

7 Q. BY MR. DERSTINE: So the screen on the left is
8 a map, and that reflects the four sign locations that
9 were agreed to at the prefiling conference; is that
10 right?

11 A. That's correct.

12 Q. And is that what's shown on the left screen,
13 is -- I think we've marked an exhibit. Is that TEP-10?

14 A. Correct.

15 Q. So is there any more -- so TEP-10 is simply the
16 map as well as -- does it contain -- what else is
17 contained in TEP-10?

18 A. It contains photographs of the -- timestamped
19 photographs of the signs in place.

20 Q. All right. And TEP-10 was filed with our
21 original exhibits or -- the original exhibit filing?

22 A. Correct.

23 Q. Okay. So, to Member Hamway and Member
24 Woodall's comments and questions, I think we did have
25 some discussion about the content of the signs and

1 what -- what is the best way to publicize these hearings
2 in a way that provides complete information but at the
3 same time, someone can see it visibly. And that's not
4 necessarily an easy thing, but we -- I think you have in
5 your PowerPoint examples of what we posted in this case
6 and compared to prior cases. Or why don't you tell us
7 what you've got.

8 A. So it was actually -- when we were doing the
9 CEC for Irvington to Kino, our last case, that this came
10 up, and that was regarding the notice signs for the
11 actual route that was approved, so where the transmission
12 line would be built.

13 And I think during the prehearing -- prefiling
14 conference, it was discussed whether we could use those
15 same changes on the notice signs. So we did that, and
16 that's the reduced sign language shown here.

17 So the one on the left is the Notice of Public
18 Hearing that we had for Irvington to Kino, which was case
19 178. And then on the right is the Notice of Hearing for
20 this project, Sonoran Substation to Wilmot Energy Center.
21 And as you can see, it did allow the map to be larger by
22 removing a lot of the text.

23 Q. So the issue that came up in deliberations over
24 the CEC conditions in the last case was directed to the
25 signs that were used to publicize the route that had been

1 approved by the CEC. We then used some of that guidance
2 in terms of and applied it to the notice of this hearing
3 and how those signs were to be, the size and the
4 information, how it was presented on these signs. Is
5 that a fair statement?

6 A. That is correct.

7 Q. Okay.

8 CHMN. CHENAL: And that was discussed at some
9 length during our pre-filing conference where we did
10 discuss this and -- and I thought it was appropriate
11 because in our last hearing, we -- well, the hearing
12 before last, we discussed at some length -- the Committee
13 discussed at some length the dissatisfaction with these
14 signs that have, you know, a lot of information, data
15 overload, where you're driving by in a car. And in that
16 hearing, the Committee basically revised the condition to
17 allow for much less information to be put onto the sign;
18 basically, just to give notice to go to a website or get
19 a telephone number. So we kind of adopted that concept
20 for this hearing for the public signs that go up.

21 And I don't know if this goes far enough or
22 not, and I suspect that's something that we're going to
23 talk about in deliberations, but I certainly thought this
24 was better that we did it this way in this case than
25 previously. But I'm mindful of the discussion and the

1 condition that we crafted and the sentiment of the
2 Committee. And maybe in the next case -- maybe this is
3 the time to talk about it.

4 I'd like some guidance, because I'm perfectly
5 comfortable with the Committee's direction in the next
6 case to make this signage where you're giving notice to
7 the public of the upcoming hearing much more in keeping
8 with the, you know, much more truncated signage.

9 So I guess I'd like a little guidance from the
10 Committee on this.

11 Member Noland.

12 MEMBER NOLAND: Thank you, Mr. Chairman. While
13 I'm not necessarily going to give you guidance, I'm going
14 to ask a question.

15 Do you have to follow the City of Tucson sign
16 ordinance on these?

17 MS. DARLING: We don't have to follow the sign
18 ordinance because they're considered temporary, but we do
19 have to get permission to place them in the road
20 right-of-way. We have to get a use permit for the road
21 right-of-way when they're in the road right-of-way or
22 private landowners' permission if they're not in a road
23 right-of-way. But, no, we don't have to get -- we don't
24 have to follow their sign code.

25 MEMBER NOLAND: You don't?

1 MS. DARLING: No.

2 MEMBER NOLAND: Okay. Thank you.

3 CHMN. CHENAL: Member Haenichen.

4 MEMBER HAENICHEN: It just seems to me that if
5 you had the Notice of Hearing and that first little bit
6 of verbiage and eliminate the map and all so you could
7 make the print a lot bigger.

8 CHMN. CHENAL: Member Woodall.

9 MEMBER WOODALL: I agree with that.

10 But on the construction signs, I would just
11 have a huge -- almost like an advert sign, like Proposed
12 Transmission Corridor. For more information call or see
13 website.

14 I mean, I would make it really like an
15 advertisement sign because that's going to get people's
16 attention. I could drive by this 100 times and not
17 notice it, even the truncated version.

18 CHMN. CHENAL: Well, we spent some time at the
19 previous hearing delineating exactly the information that
20 we wanted in the signage of proposing the new route. So
21 I don't know that we have to reinvent the wheel if we
22 want to apply that same concept to the hearing's --
23 advising of a notice of hearing coming up.

24 I mean, we can place just the minimum
25 information there, and my sense is that the sentiment of

1 the Committee is that we go further in that direction
2 than even in this -- than we did in this case, and I'm
3 happy to do that in the next meeting. And then I think
4 we'll try it out at the next hearing, and then we'll see
5 how that looks.

6 Member Jones.

7 MEMBER JONES: While we were out taking our
8 tour this morning, I've noticed a lot more usage in the
9 signage where they'll actually put a hashtag symbol so
10 people with their cellphones can click on it, and it
11 takes them directly to a link where they get a lot more
12 information on what's proposed.

13 And so if we economize by using those types of
14 things and linkages, that gives us more space to put
15 notice, you know, and some of those larger letters so
16 people actually know what's going on.

17 CHMN. CHENAL: Okay. That sounds like, I
18 think, a good way to proceed.

19 Member Noland.

20 MEMBER NOLAND: Mr. Chairman, the only thing
21 that I disagree with the previous comment is I think a
22 map is important just so that people understand the area
23 that is affected, and you're not going to get -- you
24 know, this is a different situation here. There are very
25 few property owners, and there are very few residences

1 out there. But you get in a bigger project, and then
2 you're going to get a thousand calls if people don't know
3 where the project is going to be; whereas, if you just
4 give a basic map, not a big, detailed map, but a basic
5 map of the area, I think that will let people know what
6 you're talking about. And then some of them will go, Oh,
7 well, that's not in my area. I'm not worried about it.

8 CHMN. CHENAL: I think that was the idea that
9 we had when we provided the notice of public hearing on
10 the signage in the example at the right because
11 there's -- I mean, you'll see that -- I mean, I don't
12 know what we would take out from that, frankly, if you're
13 going to include a map. And I tend to agree with you.
14 So that was the idea.

15 You know, let's -- let's think about that, and
16 then when we get to the condition that talks about the
17 signage, which is the one that's being proposed is the
18 same one that we used in the case where we kind of
19 revised it down to include less information, we can maybe
20 talk a little more about it.

21 I kind of think a map is important; whereas,
22 when you already know where the route is and you're
23 putting the signage up along the route, maybe it's not so
24 important. This is to say, Hey, this is where the line
25 is going.

1 Whereas, with this notice to the public that
2 there's going to be a public hearing, there could be
3 alternative routes, and you just don't know where it's
4 going. And I think Member Noland makes a good point that
5 you're going to answer a lot of questions by putting a
6 little more information in the sign. So let's talk about
7 it, though, when we get to that condition.

8 But I think this is a good move. It's a lot
9 less information. I don't know. It's not quite like the
10 other signage where you can really just kind of drive by
11 and see where the route is going to go and with a
12 telephone number or website, but it serves a little
13 different purpose too. So, anyway, let's just talk about
14 it a little more when we get to that condition.

15 But I think this is a vast improvement in this
16 case over the previous notices where you need, you know,
17 glasses and you got to be standing basically right in
18 front of the sign to read it.

19 Member Woodall.

20 MEMBER WOODALL: I just wish there was a human
21 factors expert that could say, you know, a car traveling
22 at 35 miles per hour and looking over, no one would be
23 able to read it, because I would bet you 50 cents, that's
24 what they would say. And that's my concern, is that
25 we're doing something that is serving no useful purpose.

1 I mean, that's my concern. I was out there, and I'll be
2 ding-donged if I could have read the sign. And I was
3 like 20 feet away, and I wasn't traveling 35 miles an
4 hour.

5 So anyway, I'll be quiet about that now.

6 CHMN. CHENAL: Member Riggins.

7 MEMBER RIGGINS: Has there been any feedback
8 from the public? I mean, did you notice maybe more since
9 Case 178? Or does anyone say, you know, I saw this sign
10 on the side of the road? Has that ever ...

11 MR. BECK: Well, interestingly enough, in this
12 particular case, we did have one member of the public
13 that showed up at one of our public meetings, and she was
14 confused by a sign that was out along Wilmot Road which
15 was related to our previous case, which was the Kantor to
16 Nogales project.

17 And once she realized -- because she explained
18 what it was, this other project. It wasn't even in her
19 neighborhood, so she was satisfied that she didn't need
20 to talk about this project. But she was confused by the
21 signage, and she walked up to it and looked at it and
22 read it.

23 So how much value the signs have to the public,
24 I'm not sure. I think that linkage to either the website
25 or the telephone number is key. I mean, a map -- on the

1 Kantor project, I think we had a map on that sign. So
2 I'm not sure how much value they are.

3 CHMN. CHENAL: Member Noland.

4 MEMBER NOLAND: One last comment. The biggest
5 thing you want to see is Notice of Public Hearing. And
6 if somebody cares and that catches their attention,
7 they're going to stop and look at it. It's like a
8 rezoning notice. You know what those look like. You
9 know what color they are. But the big thing, it says
10 rezoning or notice. And that's the big thing. You want
11 to get somebody to stop and read it if they think they
12 care about it.

13 They have what they call a five-second rule on
14 signs and a 15-second rule on signs. Learned that in
15 politics. You know, you can put all the stuff on there
16 in the world, and nobody knows what it says. All they
17 can read is the biggest part of it, and that's where you
18 get your message across.

19 CHMN. CHENAL: Okay. Let's just talk about
20 that a little more when we get to that part of the CEC.

21 Q. BY MR. DERSTINE: I guess to simply close the
22 loop on the sign, in terms of the location and where we
23 can and can't put signs, you mentioned we have to get a
24 permit or something if we're going to put a sign in the
25 right-of-way. Are there other requirements from the City

1 or the County with regard to how close a sign can be to a
2 roadway, that sort of thing, that we also have to comply
3 with, even if we don't have to comply with the sign
4 ordinance?

5 A. There is. It's variable. It comes back with
6 approval, if there's any special stipulations for that
7 sign location.

8 Q. So like the sign that we saw today on the route
9 tour was pretty well set back from the road, but that's
10 dictated by ordinances or city codes, etc.?

11 A. The sign at Old Vail Connection Road and South
12 Swan Road, I would have to check. I'm not sure if that
13 was a requirement or if we -- we have somebody in our
14 group that places the signs. If they were concerned
15 because of the construction, maybe they set it back
16 further than normal. I can check, but I'm not sure what
17 the case was there.

18 Q. Okay. I guess the bottom line is there's a lot
19 of variables that impact the visibility and the ability
20 of any given sign to convey information, and the company
21 is certainly open to doing what we can to better provide
22 notice and try to get the public to see that there's
23 something that maybe they should pay attention to and
24 come and investigate what's going on with our project.

25 CHMN. CHENAL: Member Hamway.

1 MEMBER HAMWAY: So does the City of Tucson,
2 when you build Sonoran Substation, do they -- will there
3 be a public process and will there be signage for that?

4 MS. DARLING: Yes. We have submitted the
5 Special Exception Land Use Permit application, and there
6 is a notice required for that process that there will be
7 a zoning examiner's hearing.

8 And so as soon as we know the date of that
9 hearing, we will have to post a sign for that. And they
10 have a specific size, font size, color. It's all laid
11 out very specifically as to what has to be said on there
12 and how big the notice part of it is. It's a much larger
13 sign than these signs are. It's -- I think it's 4 by 5,
14 I believe. It's really large. But it's very temporary.
15 It's literally up for 45, 60 days at the most.

16 Q. BY MR. DERSTINE: I guess the one issue we
17 didn't address is at times, depending on the location,
18 there may be Blue Stake requirements before we can post a
19 sign; right?

20 A. Anytime it's in a road right-of-way, we have to
21 get Blue Stake first before we apply for the right-of-way
22 use permit.

23 Q. And that impacts timing. What's the process?
24 How long does it take to get Blue Stake approval?

25 A. It's only within like 48 hours of when you

1 provide the location. It's the right-of-way use permits
2 that can take three to four weeks to obtain after you
3 submit the applications for those.

4 Q. Okay. So the getting signs posted is a whole
5 thing in and of itself?

6 A. It's a whole thing in and of itself.

7 CHMN. CHENAL: Let me ask this question. From
8 the prefiling conference to when the signs are posted,
9 are you saying it takes -- like for these signs, it took
10 like three or four weeks to get the use permit before the
11 signs could be posted?

12 MS. DARLING: I don't know if you noticed, but
13 we are usually on the last possible day installing the
14 signs. It was the day before the last possible day. So
15 it is always extremely tight. And we often have to call
16 Pima County or City of Tucson and say, We've really got
17 to have the permit like now. So it's always very tight
18 to get it all done in time because we can't put in for
19 the Blue Stake and all that until you've approved the
20 map.

21 CHMN. CHENAL: And that's primarily where the
22 signage is going to be in like the City of Tucson versus
23 County?

24 MS. DARLING: It's the same for City and
25 County.

1 CHMN. CHENAL: Same.

2 MS. DARLING: Same process.

3 Q. BY MR. DERSTINE: But one may be faster than
4 the other depending on who's working the desk?

5 A. Yeah, it depends on their workload. But it's
6 usually like down to the wire. We get it done. We've
7 never not gotten it done.

8 CHMN. CHENAL: Well, just for future reference,
9 I mean, I'm flexible when we have these prefiling
10 conferences. So if you think it's going to be an issue,
11 we can move back -- or move up the prefiling conference
12 to give us more time. I mean, that's certainly a
13 possibility. I mean, I'd be happy to do that just for
14 future reference.

15 MS. DARLING: Okay.

16 Q. BY MR. DERSTINE: We've covered the sign, and
17 we've covered TEP-10, which is the -- shows proof and
18 evidence that we posted the signs as directed and agreed
19 to at the prefiling conference and the locations.

20 And I think that covers the topics of your
21 testimony. Do you want to go back and kind of summarize?

22 Am I missing something? You're looking at me
23 like I skipped something.

24 A. Do you want me to cover Member Woodall's
25 question first or --

1 Q. I want you to cover it right now.

2 CHMN. CHENAL: She left.

3 MS. DARLING: Should I wait?

4 Q. BY MR. DERSTINE: Let's go ahead -- we'll go
5 ahead and go through the exhibits, and then we'll make
6 sure we get it on the record when she's here. Okay?

7 A. Okay.

8 Q. So we've covered TEP-10.

9 Well, do your -- let's go back and summarize
10 your testimony, if we can, if this is an appropriate time
11 to do that.

12 A. So, in conclusion, the CEC facilities are
13 compatible with the environment and ecology of the state
14 of Arizona because they will create little to no adverse
15 impact on environmental factors considered by the Line
16 Siting Committee.

17 There are no significant impacts on common
18 wildlife or recreation -- or creation of habitat
19 fragmentation. Sorry. Will not have a significant
20 adverse effect on special status species.

21 It is consistent with applicable land use plans
22 and policies, not substantially disrupt major scenic
23 views, not impact the use or access to recreational
24 sites.

25 It would be unlikely to affect known historic

1 properties, cultural resources, or archeological sites
2 and not increase noise impacts from operation or
3 maintenance.

4 Q. Now, I don't know how many bullets down, but
5 it's --

6 A. The land use one?

7 Q. The land use.

8 So Ms. Rucker is going to testify to land use,
9 but I don't think it will come as a surprise --

10 A. I'm giving notice in advance.

11 Q. It won't come as a surprise to the Committee
12 that -- that it will be Ms. Rucker's testimony that there
13 was no adverse impacts on land use, but we're not there
14 yet. But we'll get there; right?

15 A. Yes.

16 MR. DERSTINE: So I think with that, I'd like
17 to move the admission of TEP-6, which is Ms. Darling's
18 direct -- written direct testimony; TEP-16, the slide
19 PowerPoint presentation that she used to assist her in
20 her testimony here today; and TEP-10, which is the
21 evidence of the posting of the signs, which she just
22 covered.

23 CHMN. CHENAL: Okay. The applicants move for
24 the admissibility of TEP-6, 10, and 16.

25 Any objection?

1 (No response.)

2 CHMN. CHENAL: There being no objection, TEP-6,
3 10, and 16 are admitted.

4 (Exhibits TEP-6, TEP-10, and TEP-16 were
5 admitted.)

6 MR. DERSTINE: And I can make Ms. Darling
7 available for cross-examination with the opportunity to
8 redirect to address the -- Member Noland's question that
9 she's holding.

10 CHMN. CHENAL: That's fine. And we'll have --
11 that will be tomorrow. Member Noland will be back
12 tomorrow, and we'll just have Ms. Darling testify to
13 that.

14 But in terms of cross-examination, maybe --
15 Mr. Robertson, do you have any questions of the witness?

16 MR. ROBERTSON: I do, Mr. Chairman, very few.
17 I actually spoke with Ms. Darling during the afternoon
18 recess and told her what I was going to be asking her, so
19 I think it will be pretty quickly.

20 CHMN. CHENAL: Please proceed.

21 MR. ROBERTSON: Patrick, you have already
22 pulled up what is the slide for the 138kV transmission
23 line, and this shows the Northern 2 Route and the
24 Southern 1 Route Alternative in the simulation part.

25

1 CROSS-EXAMINATION

2 BY MR. ROBERTSON:

3 Q. Ms. Darling, directing your attention to that
4 particular slide -- and let me find my laser pointer.

5 Is the roadway that we see sort of in the
6 middle of each photograph against the background, is that
7 South Swan Road?

8 A. Yes, it is.

9 Q. And that would be a portion of the South Swan
10 Road that we traveled on today on the tour; correct?

11 A. Correct.

12 Q. And the location from where these two
13 photographs are taken, that would be on the west side of
14 South Swan Road; correct?

15 A. Correct.

16 Q. Would that be a portion of the South Wilmot
17 property?

18 A. Yes, it would.

19 Q. And what these photos depict is a predominant
20 vegetation there appears to be a combination of cholla
21 cactus and creosote; is that correct?

22 A. That is correct.

23 Q. Is that fairly typical for the land that abuts
24 the west side of Swan Road that is owned by South Wilmot?

25 A. Yes, it is.

1 Q. And the terrain depicted in these photos is
2 basically flat and level as well. Would that also be
3 typical of the South Wilmot land on the west side of Swan
4 Road?

5 A. Yes, it is.

6 Q. Now, I'm going to direct your attention to
7 Exhibit J, which is the one relating to stakeholder
8 outreach. And on page J-5 -- this is part of the
9 application -- you are listing various stakeholders with
10 whom the company met; correct?

11 A. Correct.

12 Q. And for Diamond Ventures, you show that Diamond
13 Ventures people in attendance at the two stakeholder
14 meetings that are identified were Robert Tucker and Bill
15 Kelley; is that correct?

16 A. That is correct.

17 Q. Would that be the same Robert Tucker -- it's
18 been a long day -- to whom I made reference in my
19 questions to Mr. Beck this afternoon discussing the
20 agreement that has been reached between the company and
21 South Wilmot to modify the corridor as it relates to the
22 South Wilmot land?

23 A. Yes, it would be.

24 Q. Okay. That's all I have in the way of
25 questions.

1 I can't resist. I've tried to. But earlier
2 this afternoon you defined a prehistoric site as being
3 over 50 years.

4 A. I said a listed site.

5 Q. A listed site.

6 A. Right. So a historic site is greater than 50
7 years. And then I was going to go on to say that a
8 prehistoric site, but it's -- anything over 50 years is a
9 historic site. And then a prehistoric site predates
10 that.

11 MR. ROBERTSON: Okay. Well, that's what I
12 picked up on. So I know, chronologically, I qualify to
13 be a listed site. I'm now working on my site boundaries.
14 Thank you.

15 CHMN. CHENAL: For those of us in the room that
16 are historic sites, it's a tough pill to swallow.

17 MS. DARLING: I'm one too. Thank you.

18 CHMN. CHENAL: Okay. Mr. Schmaltz, any
19 questions of Ms. Darling?

20 MR. SCHMALTZ: No, Mr. Chair.

21 CHMN. CHENAL: Okay. Any questions from the
22 Committee?

23 (No response.)

24 CHMN. CHENAL: Any redirect of Ms. Darling?

25 MR. DERSTINE: Other than the one question or

1 topic that Ms. Darling would like to address that's
2 responsive to a question from Member Noland which we'll
3 carry till tomorrow, I don't have any redirect.

4 I guess the question is -- it's 4:50-something
5 on my watch -- whether we want to start with Ms. Rucker
6 or take her fresh tomorrow morning.

7 CHMN. CHENAL: Well, I'm thinking maybe take
8 her fresh tomorrow morning. We've got -- we would then
9 have Ms. Rucker tomorrow. We have -- Mr. Schmaltz has a
10 witness. I don't know how long it will take. But I
11 think he suggested earlier, if there's questions of the
12 witness, it might take an hour.

13 So how long do you think Ms. Rucker's
14 testimony would be?

15 MR. DERSTINE: I'm going to venture a guess of
16 about 45 minutes.

17 CHMN. CHENAL: Okay. I just -- it's been a
18 long day. It's been -- we've been at it, and I think it
19 would be better to have it tomorrow.

20 MR. DERSTINE: Okay.

21 CHMN. CHENAL: And we'll have those two
22 witnesses. We may have more witnesses. I don't know.

23 Mr. Robertson, are you intending to call a
24 witness? I believe you had said no.

25 MR. ROBERTSON: No, I'm not, Mr. Chairman.

1 CHMN. CHENAL: So, you know, if we have that
2 and we get into closing arguments and deliberation, we'll
3 have plenty of time to complete the deliberations.

4 I just think at this time of the day, it's --
5 since we have plenty of time tomorrow, there's no need to
6 start Ms. Rucker tonight. If we were going to run out of
7 time tomorrow, I'd think, Yeah, let's push on and let's
8 make sure we're going to finish tomorrow. But I don't
9 see any question but that we will finish tomorrow in
10 plenty of time.

11 MR. DERSTINE: She will be disappointed to hear
12 that. She was eager to be done today, but I think
13 everyone understands.

14 CHMN. CHENAL: The record can't reflect body
15 language, but I think Ms. Rucker is happy that she will
16 testify tomorrow.

17 Is there anything else that we need to take up
18 before we adjourn for this evening? Anything from the
19 Committee that we need to discuss?

20 (No response.)

21 CHMN. CHENAL: Anything from the applicant or
22 other counsel?

23 MR. DERSTINE: No.

24 CHMN. CHENAL: Okay. So I think we're making
25 very good progress. And -- yes, Mr. Robertson.

1 MR. ROBERTSON: Excuse me, Mr. Chairman. I do
2 not have a witness to call. But since we're dealing with
3 sort of cleanup matters at this point, during the
4 prehearing conference that we had last week, I inquired
5 of the parties as to whether or not they would be willing
6 to have Exhibit SW-1 come in by way of stipulation. And
7 if they're still amenable to its admission by way of
8 stipulation, subject to a ruling by you, I'd like to so
9 move at this time so I don't overlook that.

10 CHMN.CHENAL: Is it possible to put that on the
11 screen so we're all familiar with what it is? I believe
12 it's the map.

13 MR. ROBERTSON: That's correct. It's the one
14 on the right-hand screen.

15 CHMN. CHENAL: And then how has that been
16 marked, Mr. Robertson?

17 MR. ROBERTSON: Exhibit SW-1.

18 CHMN. CHENAL: SW-1.

19 Okay. Exhibit SW-1 is being moved for
20 admission.

21 Any objection?

22 (No response.)

23 CHMN. CHENAL: There being no objection, SW-1
24 is admitted.

25 (Exhibit SW-1 was admitted.)

1 MR. ROBERTSON: Thank you.

2 CHMN. CHENAL: All right. So we'll adjourn now
3 and see everyone tomorrow morning at 9 a.m.

4 (The hearing recessed at 4:55 p.m.)

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1 STATE OF ARIZONA)
2 COUNTY OF MARICOPA)

3 BE IT KNOWN that the foregoing proceedings were
4 taken before me; that the foregoing pages are a full,
5 true, and accurate record of the proceedings, all done to
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12 I CERTIFY that I have complied with the ethical
13 obligations set forth in ACJA 7-206(F)(3) and ACJA
14 7-206(J)(1)(g)(1) and (2). Dated at Phoenix, Arizona,
15 this 1st day of October, 2018.

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27 with the ethical obligations set forth in ACJA
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