

1 BEFORE THE ARIZONA POWER PLANT LS-367

2 AND TRANSMISSION LINE SITING COMMITTEE

3

4 IN THE MATTER OF THE APPLICATION ) DOCKET NO.  
 4 OF PINAL COUNTY ENERGY CENTER, ) L-21314A-24-0144-00233  
 LLC, IN CONFORMANCE WITH THE )  
 5 REQUIREMENTS OF ARIZONA REVISED ) LS CASE NO. 233  
 STATUTES 40-360 ET. SEQ., FOR A )  
 6 CERTIFICATE OF ENVIRONMENTAL )  
 COMPATIBILITY AUTHORIZING THE )  
 7 CONSTRUCTION OF A 480 MW NATURAL )  
 GAS-FIRED, SIMPLE CYCLE, PEAKING )  
 8 POWER GENERATING FACILITY )  
 LOCATED NEAR CASA GRANDE, ) EVIDENTIARY HEARING  
 9 ARIZONA, IN PINAL COUNTY. )  
 \_\_\_\_\_ )

10

11 At: Casa Grande, Arizona

12 Date: August 13, 2024

13 Filed: August 20, 2024

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15 REPORTER'S TRANSCRIPT OF PROCEEDINGS

16

VOLUME II  
(Pages 199 through 441)

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By: Jennifer Honn, RPR  
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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 Francisco Grande Hotel and Golf Resort,  
5 12684 West Gila Bend Highway, Casa Grande, Arizona,  
6 commencing at 9:04 a.m. on August 13, 2024.

7

8 BEFORE: ADAM STAFFORD, Chairman

9 GABRIELA S. MERCER, Arizona Corporation Commission  
10 LEONARD DRAGO, Department of Environmental Quality  
11 DAVID FRENCH, Arizona Department of Water Resources  
(via videoconference)  
12 NICOLE HILL, Governor's Office of Energy Policy  
R. DAVID KRYDER, Agricultural Interests  
13 SCOTT SOMERS, Incorporated Cities and Towns  
(via videoconference)  
14 ROMAN FONTES, Counties  
(via videoconference)  
15 MARGARET "TOBY" LITTLE, PE, General Public  
DAVE RICHINS, General Public  
(via videoconference)  
16 JOHN GOLD, General Public

16

17

18 APPEARANCES:

19 For the Applicant:

20 Jason Moyes, Esq.  
21 Moyes Sellers & Hendricks LTD.  
1850 North Central Avenue  
22 Suite 1100  
Phoenix, Arizona 85004

23

24

25

1 (TIME NOTED: 9:04 a.m.)

2 (Beginning of route tour.)

3 CHMN STAFFORD: Good morning. Let's go  
4 back on the record. Now, we're about to embark on the  
5 tour. I just want to admonish the Members, don't ask any  
6 questions to the applicant until we get to the stop, we  
7 get the court reporter set up, so the questions and  
8 answers are on the record.

9 Mr. Moyes, do you want to talk us through  
10 the tour so the people listening can hear what we're  
11 going to be doing?

12 MR. MOYES: Yes, Mr. Chairman. In the  
13 exhibit binder under PCE-15 is a description of the route  
14 tour. There will be one stop. We'll be leaving the  
15 hotel, traveling west and then turning to the south on --

16 CHMN STAFFORD: Looks like Montgomery.

17 MR. MOYES: Yes, Montgomery. We will from  
18 there go all the way down south to the first stop point  
19 at the bottom, which is marked as number 1 on your tour  
20 route map. That's where we will stop, get out, answer  
21 any questions.

22 Mr. Demirchian will be accompanying us.  
23 Mr. Thompson is trying to make it here and may have to  
24 meet us at the site. There was a rollover on the 10  
25 coming out of Phoenix, and another one our staff members

1 is trapped in that as well. So we'll do our best.

2 Mr. Demirchian should be able to answer any questions  
3 regarding the site from that location.

4 CHMN STAFFORD: Okay. So the witnesses  
5 will be Demirchian and Thompson, you said?

6 MR. MOYES: Yes.

7 CHMN STAFFORD: And they've already been  
8 sworn. I want to make sure.

9 MR. MOYES: Hopefully Thompson makes it  
10 there.

11 CHMN STAFFORD: Okay.

12 MR. MOYES: After that we'll travel back  
13 north and go to the west to the other U point, or U-turn  
14 that you can see at the end of Selma Highway. We'll turn  
15 around there just to give you a view from both the east  
16 side of the project and the north side of the project,  
17 which are really the only roads we have access to.

18 CHMN STAFFORD: Okay.

19 MR. MOYES: And from there we'll head back  
20 north on Gila Bend Highway.

21 CHMN STAFFORD: All right. Thanks. Now,  
22 Members, go ahead and take the -- they have a handout  
23 that was a map in the exhibit to take with us, so you'll  
24 only be able to ask question at the stop, and then once  
25 we get back after the tour you can ask more questions



1 about whatever you've seen.

2 Just make sure you can note it on -- to  
3 yourself so you can ask, you can point to where you're  
4 asking questions about. I imagine as we drive past some  
5 of the residences and neighborhoods, make a note of that  
6 and we can come back and ask the applicant about any  
7 questions you may have once we get back here on the  
8 record. With that let's go into recess and start on the  
9 tour. We stand in recess.

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

11

12 (TIME NOTED: 9:31 a.m.)

13 (Arrival at Stop No. 1)

14 CHMN STAFFORD: Good morning. Let's go on  
15 the record. Mr. Moyes, so we're here at the stop  
16 identified on the route tour. Our one company witness  
17 who's available to answer any questions that the  
18 Committee may have is Mr. Garen Demirchian, who you met  
19 yesterday. He was sworn in yesterday.

20 As you can see looking here to the south --  
21 I mean the northwest.

22 MEMBER KRYDER: The other south.

23 MR. MOYES: This is the 500kV along with  
24 the WAPA 230 line that was described in all application  
25 materials. And we'll turn it over to Garen. If any of

1 the Members have questions or -- you've seen along the  
2 way here the nearest residences, probably the closest one  
3 you could see when we went out to that west end and did  
4 the U-turn, and the rest are about a mile back to the  
5 east. So --

6 CHMN STAFFORD: All right. So you have,  
7 looking at the map, the 500kV line comes through and it  
8 jogs over and to the right we can see with circles with  
9 the crop on the map, this is where the plant's going to  
10 be right in this location.

11 MR. DEMIRCHIAN: That is correct.

12 CHMN STAFFORD: What is all this stuff  
13 turned up? It smells kind of bad. What is going on  
14 with --

15 MEMBER KRYDER: There's nothing bad. It's  
16 the residue from the beef you ate last night.

17 CHMN STAFFORD: It's manure is what it is.  
18 All right.

19 MR. DEMIRCHIAN: So for giving you an  
20 orientation of where we stand. To the left you see that  
21 wood pole, that's due south, and that's where the water  
22 well is and that's the power for operating the well pump.

23 And the water line underground goes, and  
24 right now is connecting to the irrigation well somewhere  
25 up here. We plan to repurpose that and use that vicinity

1 for our needs.

2 Right immediately to my right,  
3 approximately four or 500 feet is where the SRP  
4 switchyard will start and will parallel to Midway Road.  
5 And then from there, to the west will be our balance of  
6 the plant equipment which are the chiller equipment, the  
7 storage tank for the terminal energy storage, and then  
8 from there on approximately -- thank you -- we're looking  
9 at northwest direction, actually, where that wheel is  
10 there is where our gas turbines will be lined up, and  
11 past the gas turbines, in kind of the same diagonal  
12 direction is a battery storage.

13 Further north is some of our support  
14 structures, operations building, maintenance shop, back  
15 of the house, again, like locker rooms for the operators,  
16 et cetera.

17 That's going to -- very simple description  
18 of the overall layout.

19 MEMBER GOLD: Quick question again,  
20 Mr. Chairman.

21 CHMN STAFFORD: Yes, Member Gold.

22 MEMBER GOLD: Where is the generators going  
23 to be?

24 MR. DEMIRCHIAN: Generators are  
25 approximately where you see that irrigation wheel. The

1 first one to the right that's --

2 MR. MOYES: You mean pivot, Garen?

3 MR. DEMIRCHIAN: Yes.

4 MEMBER GOLD: Where's the irrigation wheel?

5 MR. MOYES: Member Gold, can you see that  
6 structure?

7 MEMBER GOLD: Yes.

8 MR. MOYES: Straight ahead with the white  
9 bars coming up? That's the pivot, that's where the  
10 irrigation line circles around.

11 MEMBER GOLD: So I see the irrigation  
12 wheel, and where are the generators?

13 MR. MOYES: Roughly in that location.

14 MR. DEMIRCHIAN: In that location.

15 CHMN STAFFORD: If you look at the map you  
16 can see where the line jogs right there.

17 If you look at the map where you can see  
18 the 500kV line comes over, it jogs and goes north and  
19 then west again. It's just north -- see the edge of that  
20 pole right there?

21 MEMBER GOLD: Yeah.

22 CHMN STAFFORD: That's like, that's the  
23 pole where it turns going north to go west, it's going to  
24 be north of that; right?

25 MR. DEMIRCHIAN: That is correct.

1 CHMN STAFFORD: Okay.

2 MEMBER GOLD: So about a quarter mile from  
3 here I'm just looking at distance. I see it.

4 MR. DEMIRCHIAN: And for the description  
5 off our interconnection. So these are the structures  
6 that were 97, and the one down there is 96. So we will  
7 intercept the 500kV lines which are on the right side of  
8 the structures. So they will come in into the SRP  
9 switchyard, loop in to the breaker, come right back up  
10 again.

11 CHMN STAFFORD: How will it come off the  
12 structure here?

13 MR. DEMIRCHIAN: Well, basically we'll have  
14 new structures, and then we'll have one at the entrance  
15 of our switchyard, which is like a dead-end structure.  
16 So there'll be one, two new structures here, as they  
17 intersect they have what's called a dead-end structure.  
18 So it will be two more here and then another one at the  
19 very end. Maybe something like what's called an A-frame  
20 structure at the entrance to the substation.

21 CHMN STAFFORD: It will tie directly into  
22 this line. There's no tie breaker on this side.

23 MR. DEMIRCHIAN: The breakers are over  
24 there.

25 MR. THOMPSON: There'll a 90 degree line.

1 MEMBER GOLD: So Mr. Chairman.

2 CHMN STAFFORD: Member Gold.

3 MEMBER GOLD: How big is the footprint of  
4 the generators, what are the dimensions? Width and  
5 depth.

6 MR. DEMIRCHIAN: Can I, Mr. Committee  
7 Member, can I get back to you? I have the plan and I can  
8 measure it and give you exact dimension.

9 MEMBER GOLD: But ballpark, runs a couple  
10 hundred feet?

11 MR. DEMIRCHIAN: Yes, sir.

12 MEMBER GOLD: Okay. And do you plan to put  
13 walls around them or bury them or something to work on  
14 the sound?

15 MR. DEMIRCHIAN: No. They already have  
16 enclosures. The generators are inside boxes, enclosures  
17 themselves. And as I described yesterday, the points  
18 where the sound may be emitting we will be putting the  
19 sound attenuation baffling in those entrance locations.

20 MEMBER GOLD: Is that that baffle that puts  
21 in a reverse sine curve so it cancels out the noise?

22 MR. DEMIRCHIAN: That is one method and the  
23 other one is it had absorbing material like insulation.

24 MEMBER GOLD: Sound-absorbing material.

25 MR. DEMIRCHIAN: Sound absorbing.

1 MEMBER GOLD: So you're using both of  
2 those. What is the decibel reading outside the  
3 generators, and what's the decibel reading --

4 CHMN STAFFORD: They have a witness that's  
5 going to testify to that this afternoon, the second  
6 panel, it's the whole noise expert guy.

7 MEMBER GOLD: Gotcha.

8 MR. DEMIRCHIAN: So the decibel reading  
9 immediately outside of the generators is between 80 to 85  
10 DB.

11 MEMBER GOLD: So a little louder than it is  
12 here in the wind.

13 MR. DEMIRCHIAN: But then as you step back  
14 it starts to -- it will go down. That's the  
15 manufacturer's performance guarantees.

16 MEMBER GOLD: Gotcha.

17 MEMBER LITTLE: Mr. Chairman.

18 CHMN STAFFORD: Yes, Member Little.

19 MEMBER LITTLE: Are those the residences  
20 that are closest that were talked about yesterday? This  
21 one that's underneath the three power poles right there  
22 and then there's, looks like there's one over here.

23 MR. MOYES: Those are not houses.

24 MR. THOMPSON: I think residences are  
25 behind us.

1 MR. MOYES: Those are barn coverings  
2 storing alfalfa and hay.

3 MEMBER LITTLE: Would you point out the  
4 residences, please?

5 MR. THOMPSON: There's one right to the  
6 northeast.

7 MEMBER LITTLE: Ah, okay.

8 MR. THOMPSON: See the yellow?

9 MEMBER LITTLE: Yes.

10 MR. MOYES: In you recall where we made the  
11 U-turn.

12 MEMBER LITTLE: That way.

13 MR. MOYES: Further to the northwest was  
14 the closest residence.

15 CHMN STAFFORD: So on the map you're  
16 talking about where -- north of where we did the U-turn  
17 over here.

18 MR. MOYES: Correct. Right there.

19 CHMN STAFFORD: Okay.

20 MEMBER LITTLE: It looks --

21 MEMBER GOLD: Mr. Chairman.

22 MEMBER LITTLE: It looks to me like --

23 MEMBER GOLD: Are those residences closer?

24 CHMN STAFFORD: I see houses over there, or  
25 buildings anyway.



1 MR. MOYES: So if you were to look at the  
2 project boundaries itself the one that is closest to an  
3 outer boundary, is that northwest.

4 MEMBER GOLD: What are the closest to the  
5 generators, the ones that make the noise, would be those  
6 houses there?

7 CHMN STAFFORD: No, the generators are over  
8 at that end of the property, there.

9 MR. DEMIRCHIAN: They're further away.

10 CHMN STAFFORD: Over here we're looking  
11 at --

12 MR. DEMIRCHIAN: Right here.

13 CHMN STAFFORD: Okay.

14 MEMBER KRYDER: So these, Mr. Chairman --

15 CHMN STAFFORD: Yes.

16 MEMBER KRYDER: -- these would be the  
17 closest to both the property and the generators?

18 MR. DEMIRCHIAN: No, sir. So these would  
19 be -- these are approximately 4500 feet from the nearest  
20 generator. These houses.

21 MEMBER KRYDER: Okay.

22 MR. DEMIRCHIAN: But the house in the  
23 northwest corner is the closest to the property line, but  
24 it's about 2500, 2600 feet from the closest generator.

25 MEMBER KRYDER: Okay. Are you an

1 electrical engineer?

2 MR. DEMIRCHIAN: Mechanical.

3 MEMBER KRYDER: Okay. You'll know the  
4 answer, then. What's -- is there a formula, you said the  
5 distance from the sound source reduces and I assume it  
6 following a straight line formula.

7 MR. DEMIRCHIAN: No, it's actually  
8 logarithmic.

9 MEMBER KRYDER: Logarithmic. Okay.

10 MR. DEMIRCHIAN: It reduces further more as  
11 it goes away.

12 MEMBER KRYDER: Okay. So but there is a  
13 common and widely accepted formula that says one meter is  
14 this, 10 meters is that, et cetera, et cetera. Great.  
15 And we'll get that this afternoon?

16 MR. DEMIRCHIAN: From our expert, yes, sir.

17 MEMBER KRYDER: Perfect.

18 MEMBER HILL: Weather conditions, humidity,  
19 the types of things that -- types of vegetation cover,  
20 are you guys going to talk about that as well?

21 MR. DEMIRCHIAN: For the equipment?

22 MEMBER HILL: For the sound and the travel.

23 MR. DEMIRCHIAN: Yes, I think our expert  
24 will address that as well.

25 MEMBER HILL: Okay.

1 MEMBER LITTLE: Mr. Chairman, may I ask the  
2 public a question?

3 CHMN STAFFORD: They're not sworn.

4 MEMBER HILL: Mr. Chair, I have a follow-up  
5 question while we're here, and I was thinking about we  
6 keep calling it the SRP substation. What is the  
7 arrangement with SRP who's building the substation? Are  
8 you building it and they're taking title to the land?

9 MR. THOMPSON: Switchyard, not substation.

10 MEMBER HILL: Switchyard, I'm sorry.

11 MR. THOMPSON: So it's a switchyard  
12 because --

13 THE COURT REPORTER: I can't hear you.

14 CHMN STAFFORD: You got to speak louder.

15 MR. THOMPSON: It's the switchyard, all  
16 this transformation is on this side of the fence, so SRP  
17 requires that they own and control that switchyard. That  
18 is mandatory of any utility and they will be able to  
19 control that switchyard.

20 MEMBER HILL: Are you building it and then  
21 giving it to them?

22 MR. THOMPSON: We just had a call with them  
23 yesterday. Technically we can build it --

24 MEMBER HILL: Right.

25 MR. THOMPSON: -- but the red type they

1 would put us through to do that, to follow their  
2 specifications, they told us you're better off just  
3 letting us build it. So they would be building it.

4 MEMBER HILL: So we permit switchyards  
5 but --

6 MR. THOMPSON: We pay for it. 100 percent.

7 CHMN STAFFORD: You pay for it but SRP will  
8 build it.

9 MR. THOMPSON: And we turn it over to them.  
10 So we pay for it, we turn title over to them.

11 MEMBER HILL: So Mr. Chairman, my question  
12 is we're permitting a switchyard but in some ways the  
13 applicant isn't here, SRP should be the applicant for the  
14 switchyard. I'm just --

15 CHMN STAFFORD: Yeah.

16 MR. THOMPSON: No, it's our  
17 interconnection. That's not --

18 MEMBER HILL: But SRP's infrastructure.

19 CHMN STAFFORD: It's kind of odd that the  
20 entity before us is the one who will -- is going to pay  
21 for it but the actual entity will own and operate it.

22 MEMBER HILL: Own, operate, build it is --

23 CHMN STAFFORD: Build is SRP.

24 MEMBER HILL: -- SRP and we can't ask them  
25 questions. That's not --

1 MR. THOMPSON: That's with every switchyard  
2 just so you know, whether it's Tucson Electric, APS or --  
3 or SRP. Every interconnection, the utility controls that  
4 switchyard.

5 MEMBER HILL: I think most of the time, we  
6 see utilities coming in to do this. This is unique that  
7 you're a merchant, and so it feels a little bit different  
8 to us.

9 MR. THOMPSON: It's unique in that  
10 Arizona's an integrated system that has a lot of  
11 integrated resources.

12 CHMN STAFFORD: Right. Because every --  
13 every -- every utility is its own balancing authority  
14 here. We don't have an RTO.

15 MR. THOMPSON: But all these solar  
16 facilities, for example, it's the same thing. There are  
17 switchyards that they're building --

18 CHMN STAFFORD: Most of them build  
19 substations.

20 MEMBER HILL: Exactly. So that's what I'm  
21 confused by the whole switchyard piece is that we usually  
22 hear from the utility who's going to own and operate it  
23 as part of this process.

24 CHMN STAFFORD: We've had cases where the  
25 applicant was --

1 MEMBER HILL: A merchant.

2 CHMN STAFFORD: Well, not a merchant. They  
3 were a developer. They weren't one of the public service  
4 corporations.

5 MEMBER HILL: Okay.

6 CHMN STAFFORD: They were going to build a  
7 switchyard or have a switchyard that the -- and I  
8 think -- I seem to recall we had several cases where they  
9 had the CEC split in two pieces because a section of it  
10 was going to belong to the company utility, the  
11 switchyard and the portion of the line that was going to  
12 be -- there was going to be owned and operated utilities  
13 that the CEC was bifurcated and a piece that would be  
14 owned by the developer and a piece that was being owned  
15 by the utility.

16 MR. MOYES: If I might, Chairman,  
17 jurisdictionally a switchyard by itself does not qualify  
18 as a transmission line under the statute unless we had  
19 now a mile or longer, five or more structures with a  
20 switchyard.

21 MEMBER HILL: Right. There was an effort  
22 to remove switchyards from the statute last year and it  
23 failed.

24 CHMN STAFFORD: Any other questions from  
25 Members?

1 THE REPORTER: Speak one at a time.

2 CHMN STAFFORD: Any other questions from  
3 Members? All right. So we have -- the next piece of the  
4 tour will be we'll head south and then to the end.  
5 That's where we'll see the Greene Wash -- now, what's --  
6 the boundary goes right up to the Greene Wash; correct,  
7 of the property?

8 MR. THOMPSON: Correct.

9 CHMN STAFFORD: What's -- I seem to recall  
10 some comments from Game & Fish about a setback from the  
11 Greene Wash.

12 MR. THOMPSON: Right. So as we've  
13 described our switchyard will be over here. Our  
14 equipment will be on that side. The Greene Wash is  
15 closer down that direction, and then the east main canal  
16 will cut across right about over there and start going  
17 back up.

18 And so that Greene Wash mainly follows  
19 where the east main canal comes in. That's the reason  
20 why its vegetation stays there, because there's water  
21 flowing in that area.

22 CHMN STAFFORD: Okay. So the only  
23 equipment down that way is going to be the well; right?

24 MR. THOMPSON: The well with the -- where  
25 you see that telephone pole and the small transformer.

1 CHMN STAFFORD: Right.

2 MEMBER HILL: So there's no intention to  
3 develop further south of here.

4 MR. THOMPSON: No.

5 MEMBER KRYDER: Mr. Chairman.

6 CHMN STAFFORD: Yes, Member Kryder.

7 MEMBER KRYDER: Question: How deep is your  
8 well and what size?

9 MR. THOMPSON: It's 850 feet to 1,000 feet.

10 MEMBER KRYDER: What diameter?

11 MR. THOMPSON: I'll have to look at my --

12 MEMBER KRYDER: Probably a 10 or a 12.

13 MR. THOMPSON: I think it's 12.

14 MEMBER KRYDER: Okay. When we get back,  
15 yeah.

16 MR. THOMPSON: It's permitted for 900  
17 gallons per minute.

18 MEMBER KRYDER: That's where I was going.

19 Okay. Great.

20 MR. THOMPSON: It doesn't produce at that  
21 level because it's not needed to produce at that level.

22 MEMBER KRYDER: But the water's there, it  
23 would produce at that level.

24 MR. THOMPSON: It would produce at that  
25 level. MSIDD came in and rehabbed that well a few years



1 back.

2 CHMN STAFFORD: MSIDD was what?

3 MR. THOMPSON: Maricopa-Stanfield  
4 Irrigation and Drainage District.

5 MEMBER KRYDER: You're buying credits from  
6 CAP water and where would that be reinserted if used?

7 MR. THOMPSON: Within the MSIDD service  
8 territory.

9 MEMBER KRYDER: They've got a restoration  
10 bank.

11 MR. THOMPSON: Correct. It would be within  
12 their territory bank, not in any other irrigation  
13 district.

14 MEMBER KRYDER: So you simply buy it, it's  
15 a puddle of your -- it's a big puddle.

16 MR. THOMPSON: Yes.

17 MEMBER KRYDER: You got it.

18 CHMN STAFFORD: They have a recharge  
19 facility somewhere?

20 MR. MOYES: They have a groundwater savings  
21 facility permit, which is different than a recharge  
22 facility that most people think of where they're dumping  
23 water and letting it seep back into the ground. A  
24 groundwater savings facility is where the district in  
25 this case have their members who otherwise would be

1 pumping water forego that pumping in order to take CAP  
2 surface water from somebody else who has the availability  
3 to do that.

4 And so you are basically offsetting what  
5 water otherwise would have been pumped by a farmer and  
6 then replacing, they're using surface instead.

7 And so when you buy those credits it's  
8 basically reducing the amount of irrigation water that  
9 would have been pumped from that territory. Their  
10 groundwater savings facility permit covers a certain  
11 territory and so the way the exchange works has to take  
12 place within their boundary of that facility.

13 CHMN STAFFORD: Okay. So how does -- I  
14 guess you have a water person testifying later today.  
15 It's my question, does that actually -- how does the  
16 physical CAP water get to the site where it's going to be  
17 consumed, or it's like -- I guess my conception is a  
18 little different that it would be -- you'd pump water  
19 here and use it and then you'd pay for surface water to  
20 be recharged someplace else, so there would be water out  
21 and water into the aquifer.

22 MR. THOMPSON: For example, we can show you  
23 in the first two years of operations of this farm when  
24 they were growing cotton, they actually used 920 acre  
25 feet of water that first year that they grew cotton. And

1 a portion of that water was pulled off the east main  
2 canal which is right here.

3 And so that's what we were explaining is  
4 the MSIDD would give you the right to pull out of the  
5 canal and they would meter how much you're pulling out of  
6 the canal, and they would say okay, you, instead of  
7 pumping 300 acre feet, you pulled that out of the canal,  
8 you would have otherwise pumped it, then that's  
9 considered, it goes into their bank as groundwater right  
10 here in MSIDD. And so they do those exchanges.

11 SRP puts CAP water in this east bank canal  
12 that flows right by where we're having our hearing and  
13 down to Desert Basin which is just two miles away. And  
14 then SRP pulls it out of the canal at Desert Basin and  
15 uses some of that water, and that's CAP water that  
16 they're using. So SRP has ability to drop water into  
17 main canal.

18 CHMN STAFFORD: The east main canal has  
19 delivery of the surface water that occurs, then.

20 MR. THOMPSON: Right.

21 MEMBER GOLD: Mr. Chairman.

22 CHMN STAFFORD: Member Gold.

23 MEMBER GOLD: So CAP water comes from the  
24 Colorado River.

25 MR. THOMPSON: Yes.

1 MEMBER GOLD: All right. And the aquifer  
2 that's underground here, has the aquifer table gone down?  
3 Where is it now? And is it coming back up because you're  
4 not taking water out? Or is it continuing to recede?

5 MR. THOMPSON: Yeah, the recharge rate is  
6 fairly low in this area. And that's what our expert will  
7 speak to today about the reservoir levels and where they  
8 are now and where they will be 50 years from now and  
9 100 years from now based on current usage.

10 MEMBER GOLD: Thank you. We'll catch him  
11 then.

12 MR. THOMPSON: One thing I wanted to  
13 mention is within three miles of this location, 22,000  
14 acre feet of groundwater is being pumped. 22,000 acre  
15 feet within three miles of this location. So that's --  
16 we're going to take between 390 all the way up to permit  
17 level 544. And what we've said, if any water we take  
18 that's greater than what's currently used here now at  
19 334, we would buy credits to offset.

20 And those credits then would be turned back  
21 to MSIDD not for sale. So that means they can't resell  
22 them.

23 What MSIDD or the other BROs propose or SRP  
24 do, they have the right to sell those credits. We would  
25 turn ours back in so they cannot be resold.

1 MEMBER GOLD: So that would basically  
2 increase the level of the aquifer rather than continue  
3 decreasing it?

4 MR. THOMPSON: It would give us a net zero,  
5 because whatever we are taking out above what's currently  
6 used, we're replenishing that, and that cannot be sold  
7 again. And so it's what's considered a net zero  
8 discharge. It's like Taylor Swift's private jet and then  
9 she buys carbon offsets to make her feel good about  
10 flying her private jet, if that puts it in perspective  
11 for you.

12 MEMBER GOLD: I have other questions I'll  
13 ask your water guy because I'm curious about --

14 MEMBER HILL: So buying these credits makes  
15 you feel good is what you're saying.

16 MEMBER GOLD: -- where the aquifer is  
17 going. Thank you.

18 MEMBER DRAGO: Mr. Chairman.

19 CHMN STAFFORD: Member Drago.

20 MEMBER DRAGO: I have a couple questions  
21 here. I'm standing at the southeast corner of the  
22 property; correct?

23 MR. THOMPSON: Correct.

24 MR. DEMIRCHIAN: No, you're where the  
25 number 1 is right there.

1 MEMBER DRAGO: Okay. And your east  
2 boundary is this road?

3 MR. THOMPSON: We come down just to right  
4 here. We don't go all the way to the I-8.

5 MEMBER DRAGO: But I'm just looking at this  
6 outline in green, is it bounded by Midway? Is this part  
7 of it?

8 MR. THOMPSON: Correct. This is Midway.

9 MEMBER DRAGO: All right. Okay. And then  
10 you looked south to see the well; right?

11 MR. THOMPSON: Yes. Where that telephone  
12 pole is.

13 MEMBER DRAGO: The well's down here; right?  
14 To the south?

15 MR. THOMPSON: We're standing here --

16 MEMBER DRAGO: Right.

17 MR. THOMPSON: And the well would be right  
18 here.

19 MEMBER DRAGO: Okay. And you acquired the  
20 rights to that well because you bought this property?

21 MR. THOMPSON: Correct.

22 MEMBER DRAGO: Okay. And you explained how  
23 you'll draw down and use that water. From your  
24 perspective, are you concerned that the wells around this  
25 area that are used for private are going to be drawn to

1 dry?

2 MR. THOMPSON: No, and that's the analysis  
3 that we've done and we worked on, and we'll show what our  
4 well impact is. And we worked with MSIDD recently  
5 because they're looking at putting another well on the  
6 property just for pumping for their own needs.

7 And they've looked at well impact studies  
8 to make sure that it would not impact this well or any  
9 other wells in the area. So we've looked at multiple  
10 wells on this property.

11 MEMBER DRAGO: Okay. All right. Thank  
12 you.

13 CHMN STAFFORD: All right. You mentioned  
14 that there's 22,000 or -- is that --

15 MR. THOMPSON: Acre feet.

16 CHMN STAFFORD: Acre feet per year in a  
17 three-mile radius. And what is -- I'm assuming that's  
18 primarily for agricultural purposes; correct?

19 MR. THOMPSON: Correct.

20 CHMN STAFFORD: Okay. There's no --  
21 there's no other power plants pulling water in a  
22 three-mile radius. The nearest one would be --

23 MR. THOMPSON: Desert Basin, but SRP uses a  
24 little bit of groundwater, but they also use CAP water  
25 for Desert Basin.

1 CHMN STAFFORD: Now, what roads would you  
2 be using to access this road for construction? I assume  
3 Midway, the road we're standing on, would be the primary  
4 avenue in. What other roads would you be using to get  
5 here?

6 MR. THOMPSON: We would come off of I-8.

7 CHMN STAFFORD: Okay.

8 MR. THOMPSON: On Montgomery.

9 CHMN STAFFORD: I-8 and Midway are both  
10 paved roads. You wouldn't be having traffic along Selma,  
11 that's unpaved.

12 MR. THOMPSON: We wouldn't be using Selma.

13 CHMN STAFFORD: That would be kicking up a  
14 lot of dirt.

15 MEMBER KRYDER: Mr. Chairman.

16 CHMN STAFFORD: Member Kryder.

17 MEMBER KRYDER: Question, what's the  
18 ambient rainfall on average?

19 MR. THOMPSON: I would have to check on  
20 that.

21 MEMBER KRYDER: Okay. I would guess in the  
22 area of eight. Eight to ten inches.

23 MR. THOMPSON: Might get some today.

24 MEMBER KRYDER: Second question. How many  
25 actual acres do you own here?



1 MR. THOMPSON: This is 350, it's about  
2 365 acres. But we classify it as 350, as you'll see,  
3 like there's some right-of-ways in here. And the project  
4 site is on 158 acres.

5 MEMBER KRYDER: I want to get at your 350.  
6 So back of the envelope, you've got 350. So an acre foot  
7 out of those 22,000 acre feet or whatever, your use in a  
8 year is approximately 13 inches, is it not? One acre  
9 foot plus a little bit, is that what I figured out? Or  
10 did I get it wrong? You -- you have it.

11 MR. THOMPSON: We're going to use about 390  
12 acre feet per year, we're permitted up to 540.

13 MEMBER KRYDER: On 350 acres --

14 MR. THOMPSON: Right, so that's about 12.  
15 That's how you get --

16 THE REPORTER: One at a time.

17 CHMN STAFFORD: One at a time.

18 MEMBER KRYDER: Okay. So 350 acres into  
19 390 acre feet, looks like here's one foot, so you're  
20 about 14 inches.

21 CHMN STAFFORD: Correct.

22 MEMBER KRYDER: Okay. That's what I wanted  
23 to hear. And of that, the ambient rainfall is eight to  
24 ten. So your ambient -- so you've got eight to  
25 ten inches of natural rain out of 14, so it looks like

1 somewhere around five to six inches that you're going to  
2 have to get out of the ground, get out of wherever.  
3 Okay.

4 MEMBER GOLD: Mr. Chairman.

5 CHMN STAFFORD: Yes, Member Gold.

6 MEMBER GOLD: So most of that water that  
7 was coming from the CAP, California Aquifer Project;  
8 correct?

9 CHMN STAFFORD: Central Arizona Project.

10 MEMBER GOLD: Central Arizona Project.  
11 CAP. Same water. So most of it is coming out of that;  
12 correct?

13 MR. THOMPSON: No, not now. Not anymore.

14 MEMBER GOLD: Now.

15 MR. THOMPSON: Now it's all groundwater.

16 MEMBER GOLD: But it will be with you -- no  
17 it won't. It will still be groundwater.

18 MR. THOMPSON: The credits we would buy  
19 would be stored credits.

20 MEMBER GOLD: Understood. Question for the  
21 local people who have wells. Do you know how deep the  
22 average personal well is in this area?

23 MR. THOMPSON: We've pulled that  
24 information, we have that today.

25 MEMBER GOLD: So you have that. Will your

1 project -- will these wells be affected, the personal  
2 wells by what you're doing for the next 10 years, say?

3 CHMN STAFFORD: They're going to have an  
4 expert witness talk about the whole hydrology.

5 MEMBER GOLD: So we can ask about that.

6 CHMN STAFFORD: Right. That's the second  
7 panel, it's going to have four witnesses on it. I think  
8 it has one person in common with the first panel, but  
9 it's a bunch of different -- there's like at least three  
10 people we haven't sworn in yet to hear testimony from.

11 MEMBER GOLD: Gotcha. So last question  
12 about the property. This is some kind of canal? This is  
13 some aquifer?

14 MEMBER KRYDER: No, no, no, no.

15 MEMBER GOLD: There was an aquifer? What  
16 was this?

17 MR. DEMIRCHIAN: My guess is this was  
18 originally put in to flow the pumped water from the well  
19 to the field.

20 MEMBER GOLD: For this farmland.

21 MR. DEMIRCHIAN: For the farmland.

22 MEMBER GOLD: And that's no longer being  
23 used.

24 MR. DEMIRCHIAN: Not this because they put  
25 in underground six-inch pipe.

1 CHMN STAFFORD: And then it goes to machine  
2 over here that rotates and waters in a circular pattern.

3 MR. DEMIRCHIAN: That is right.

4 MEMBER KRYDER: Properly called a central  
5 pivot irrigator.

6 MEMBER HILL: Mr. Chair, I have a question.  
7 I'm just reflecting on the conversation we  
8 had with the public last night. There was a lot of  
9 discussion about Table -- or the mesa here. I think  
10 that's on tribal land and the viewshed from that. Has  
11 your viewshed analysis looked at homes that might be  
12 affected, are there views, it is really a magnificent  
13 view to look at. Have you looked at that as a focal  
14 point in --

15 MR. THOMPSON: We have, and we'll show in  
16 the visuals today.

17 MEMBER HILL: Great. I hadn't looked that  
18 deep into the materials.

19 CHMN STAFFORD: We have several KOPs I  
20 think to cover today.

21 MEMBER HILL: Okay. Good. Good. Good.  
22 Great.

23 MEMBER MERCER: Mr. Chairman.

24 CHMN STAFFORD: Yes, Member Mercer.

25 MEMBER MERCER: Question: So if I remember

1 correctly, some of the comments last night from the  
2 public and they said that this well had been retired for  
3 ten years or something like that. So the studies that  
4 you are -- that you conducted, are they based on since  
5 the well came back again or before retirement?

6 MR. THOMPSON: Yeah, our data is based on  
7 2022 and 2023 actual consumptions and pulls. We went  
8 back last night and relooked at the data. This well's --  
9 this farm's been back in service for seven years.

10 MEMBER MERCER: Okay.

11 MR. THOMPSON: Not counting 2024, so 2023  
12 back.

13 MEMBER MERCER: So it's going to be a  
14 relevant study, up to date.

15 MR. THOMPSON: Absolutely. It's using 2022  
16 and 2023 data.

17 MEMBER MERCER: Thank you.

18 MEMBER GOLD: Mr. Chairman.

19 CHMN STAFFORD: Yes, Member Gold.

20 MEMBER GOLD: So just out of the blue, this  
21 seems to be manure that's been put here fairly recently.

22 MR. THOMPSON: Yes.

23 MEMBER GOLD: No, you didn't put it here.

24 MR. THOMPSON: No, the farmer trades it  
25 little bit, gets a little bit of exchange for alfalfa

1 when he sells the alfalfa to the cattle, and the dairies,  
2 they exchange some payment in manure.

3 MEMBER GOLD: So they're bartering with  
4 manure. And the man here, is he planning on doing  
5 something before you begin construction?

6 MR. THOMPSON: Yeah, in between. In  
7 between he spreads it, in between seasons.

8 CHMN STAFFORD: How many more harvests is  
9 he going to be able to go before you break ground on the  
10 project? When's his deadline to be done growing and  
11 harvest whatever he's grown?

12 MR. THOMPSON: We have an agreement that he  
13 can continue to farm until and if we would move into  
14 commercial construction. So commercial operation for us  
15 due to equipment lead times would not be until mid-2027  
16 to mid-2028. And so that means we wouldn't break ground  
17 until mid-2026.

18 CHMN STAFFORD: Assuming everything goes  
19 according to Hoyle.

20 MR. THOMPSON: Assuming financial  
21 investments.

22 MEMBER GOLD: Will he -- Mr. Chairman.

23 CHMN STAFFORD: Yes, Member Gold.

24 MEMBER GOLD: Will the farmer be able to  
25 continue farming after you're up and running?

1 MR. THOMPSON: No.

2 MEMBER GOLD: Okay.

3 CHMN STAFFORD: Any other questions from  
4 Members? Are we ready to get back on the bus and head  
5 down to the Greene Wash and then back up to the hotel?  
6 Going once.

7 MEMBER KRYDER: I think we're back on the  
8 bus.

9 CHMN STAFFORD: All right. That's the  
10 stop. Let's go off the record.

11 (TIME NOTED: 10:03 a.m.)

12 (Conclusion of Stop No. 1.)

13

14 (The tour concluded at 10:20 a.m.)

15 (The hearing resumed at 10:35 a.m.)

16 CHMN STAFFORD: Let's go back on the  
17 record. We are back from the tour.

18 Mr. Moyes, did you have more questions for  
19 the first panel or are you ready to call your second  
20 panel?

21 MR. MOYES: We are ready to call our second  
22 panel and then when they are done with their testimony we  
23 will recall our first panel for a few follow-up matters  
24 that were asked last night.

25 MEMBER LITTLE: Mr. Chairman.

1 CHMN STAFFORD: Yes, Member Little.

2 MEMBER LITTLE: May I ask one question that  
3 I was going to ask out there, but it was too hot and  
4 sunny and windy? Figured I could do it here. Well,  
5 actually I have a couple of questions.

6 First of all, when we were out on the tour  
7 when we went out Selma Highway and did that little  
8 turnaround at the very end of that -- of the Selma  
9 Highway before you get to the -- to the canal, it looked  
10 to me like there was a residence that was pretty much  
11 right under the 500kV line. Is that true? Because the  
12 ones that were pointed out when we were out there are the  
13 ones that are on the other side of the -- immediately on  
14 the other side of Selma Highway.

15 MR. MOYES: Steve, are you available to  
16 answer that?

17 MR. MORGAN: Sure. The residences that you  
18 highlighted that are kind of where the 500kV exit the  
19 property, those are our closest residences, and I do have  
20 some measurements here. I think I presented one of them  
21 yesterday.

22 But the closest residence there is 585 feet  
23 from the project boundary which is due to setbacks  
24 2640 feet from the generators. And there's a small  
25 cluster of residences there, and as we get into



1 environmental testimony in Exhibit A, I'll be talking  
2 about land use and we'll have better maps that show some  
3 of the land use and where the residential areas are.

4 Similarly we'll also touch on that visual  
5 and noise as we discuss sensitive receptors, things of  
6 that nature.

7 MEMBER LITTLE: Great. Thank you. That  
8 answers my question about that. The other question I had  
9 is that I believe that the public yesterday was saying  
10 that there their power is provided by San Carlos  
11 Irrigation District. Do you know who provides power for  
12 the well currently?

13 MR. MORGAN: I believe that's ED3, which is  
14 electrical district 3.

15 MEMBER LITTLE: And is the plan that you  
16 guys will provide power for the well or that you will  
17 continue get it from ED3?

18 MR. MORGAN: Continue to get power from  
19 ED3.

20 MEMBER LITTLE: Okay. And would you check  
21 on that for me, please? There's a lot of difference in  
22 the reliability between ED3 and San Carlos.

23 MR. MORGAN: Sure. And that's something we  
24 can circle back when we have our engineers back on the  
25 stand.

1 MEMBER LITTLE: Great. Thank you.

2 MR. MOYES: Thank you. Mr. Chairman, with  
3 that said, we'll call our second panel which consists of  
4 Mr. Steve Morgan, Mr. James Westbrook, Mr. Nathan Miller,  
5 and Mr. Brad Sohm. Mr. Morgan was already sworn in  
6 yesterday so we won't reintroduce him, but the other  
7 three will need to be sworn first and then we'll move  
8 into a brief introduction of each.

9 CHMN STAFFORD: Mr. Westbrook, would you  
10 prefer an oath or affirmation?

11 MR. WESTBROOK: Oath, please.

12 CHMN STAFFORD: Do you swear the testimony  
13 you will give in this matter will be the truth, the whole  
14 truth and nothing but the truth, so help you God?

15 MR. WESTBROOK: I do.

16 CHMN STAFFORD: Mr. Miller, same question,  
17 oath or affirmation?

18 MR. MILLER: Oath, please.

19 CHMN STAFFORD: Do you swear the testimony  
20 you will give in this matter will be the truth, the whole  
21 truth and nothing but the truth, so help you God?

22 MR. MILLER: I do.

23 CHMN STAFFORD: Mr. Sohm.

24 MR. SOHM: Yes.

25 CHMN STAFFORD: Oath or affirmation?

1 MR. SOHM: Oath, please.

2 CHMN STAFFORD: Do you swear the testimony  
3 you will give in this matter will be the truth, the whole  
4 truth and nothing but the truth, so help you God?

5 MR. SOHM: Yes, I do.

6 CHMN STAFFORD: Thank you. Please proceed,  
7 Mr. Moyes.

8 MR. MOYES: Thank you, Mr. Chairman.

9  
10 STEVE MORGAN, JAMES WESTBROOK, NATHAN MILLER,  
11 AND BRAD SOHM,  
12 called as witnesses as a panel on behalf of applicant,  
13 having been previously affirmed or sworn by the Chairman  
14 to speak the truth and nothing but the truth, were  
15 examined and testified as follows:

16

17 DIRECT EXAMINATION

18 BY MR. MOYES:

19 Q. Mr. Westbrook, would you please state for the  
20 record your full name and business address?

21 A. (Mr. Westbrook) My name is James Westbrook, and  
22 my business address is 16870 West Bernardo Drive, Suite  
23 400, San Diego, California 92027.

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

1 A. (Mr. Westbrook) I'm employed by BlueScape  
2 Environmental and I'm the president of company.

3 Q. Can you please provide a brief summary of your  
4 education and work experience?

5 A. (Mr. Westbrook) Yes, I have a master's degree  
6 in environmental science from Indiana University and a  
7 bachelor's degree in atmospheric sciences from UCLA. I  
8 am a certified consulting meteorologist and have over  
9 35 years of experience in air permitting, public health  
10 impact analysis and regulatory compliance for power  
11 generation plants.

12 Q. And what's been your role for Project Bella?

13 A. (Mr. Westbrook) I was retained to obtain the  
14 air permit for the Project Bella, and I've also provided  
15 additional documentation on the air permit process, and  
16 the air quality impacts for the CEC application.

17 Q. And you've just essentially described what your  
18 testimony will cover today; is that correct?

19 A. (Mr. Westbrook) That's correct.

20 Q. Thank you. Mr. Miller, would you please state  
21 your full name and business address from for the record?

22 A. (Mr. Miller) My name is Nathan Edward Miller,  
23 my business address is 3033 North 44th Street, Suite  
24 Number 270, Phoenix, Arizona 85018.

25 Q. And by whom are you employed and in what

1 capacity?

2 A. (Mr. Miller) I am the vice president of  
3 groundwater modeling services for Matrix New World  
4 Engineering.

5 Q. Can you please provide a summary of your  
6 educational background and experience?

7 A. (Mr. Miller) Yes. I have a bachelor's of  
8 science degree in hydrology from the University of  
9 Arizona. And I have over 25 years of experience in  
10 hydrologic consulting and groundwater modeling.

11 Q. And what has your role for Project Bella been  
12 and what is your testimony going to cover today?

13 A. (Mr. Miller) I'm the lead hydrologist in charge  
14 of water resources planning for Project Bella. My  
15 testimony will describe the existing groundwater rights  
16 and regulations governing the project site as well as the  
17 projected groundwater impacts and mitigation strategies  
18 associated with Project Bella.

19 Q. Thank you.

20 And now Mr. Sohm, would you please state your  
21 full name and business address for the record?

22 A. (Mr. Sohm) Yes, Bradley Victor Sohm, my  
23 business address is 20 East Thomas Road, Suite 1700,  
24 Phoenix, Arizona 85012.

25 Q. And by whom are you employed and in what

1 capacity?

2 A. (Mr. Sohm) I'm a senior noise specialist with  
3 SWCA Environmental Consultants.

4 Q. Mr. Sohm, can you please provide a quick summary  
5 of your educational background and experience?

6 A. (Mr. Sohm) Sure. I have a chemical engineering  
7 degree from the University of Arizona with an  
8 environmental option.

9 I am a registered professional engineer in the  
10 state of Arizona and I have over 21 years of experience  
11 performing noise impact assessments, air permitting,  
12 environmental compliance and remediation for a wide range  
13 of industrial, military, and utility clients across the  
14 U.S.

15 Q. Mr. Sohm, would you please describe what your  
16 role for Project Bella has been and what your testimony  
17 is expected to cover today?

18 A. (Mr. Sohm) Yes, I oversaw the noise impact  
19 assessment for the project that included baseline  
20 measurements at the project site, noise modeling, and  
21 assessment of those results.

22 Q. Thank you. Moving back to Mr. Morgan,  
23 commencing our environmental testimony, would you please  
24 describe the environmental analyses that were conducted  
25 in support of the CEC for this project?

1 A. (Mr. Morgan) Sure. And thanks, Jason. We  
2 conducted an environmental evaluation to support the  
3 development of the CEC application.

4 The project site was analyzed for natural,  
5 cultural, and community resources based on state  
6 regulations and other environmental criteria. So I'll  
7 kind of give you a rundown of how the presentation's  
8 going to go.

9 We're going to basically go alphabetically based  
10 on where exhibits fall within the CEC application, so  
11 we'll start with Exhibit A which is land ownership,  
12 jurisdiction and land use.

13 Then we'll move to Exhibit B, which is our  
14 environmental studies, so we have air quality which will  
15 be covered by James Westbrook, and we have water which  
16 will be covered by Nathan Miller.

17 After that we'll do Exhibit C and D which are  
18 both biological resources.

19 Then we'll do Exhibit E which is visual  
20 resources, our simulations as well as cultural resources  
21 and tribal consultation.

22 Exhibit F, which is recreational.

23 Exhibit H, which is existing plans.

24 Exhibit I, which is noise which will be covered  
25 by Brad Sohm.

1 And then public process, which is Exhibit J.

2 Q. Thank you, Mr. Morgan. Let's start with  
3 Exhibit A. We touched on this a little bit yesterday  
4 with Mr. Thompson, but can you please describe the  
5 jurisdictions associated with this project?

6 A. (Mr. Morgan) Sure. So on your right screen  
7 here on R-27 you'll see a map of jurisdictional ownership  
8 in the project vicinity. So that red boundary is a  
9 two-mile buffer around the project site.

10 The entire project site and project vicinity is  
11 unincorporated Pinal County. You can see Casa Grande is  
12 just to the north. That's the kind of teal color. The  
13 blue shaded land is state land. And the white is private  
14 land. The yellow is BLM, Bureau of Land Management land,  
15 and then to the south you can see the Tohono O'odham  
16 Nation, so that's tribal land just over two miles to the  
17 south.

18 Q. Mr. Morgan, does this project have any type of  
19 federal nexus? In other words, is there any federal  
20 environmental permitting required for Project Bella?

21 A. (Mr. Morgan) As described in Exhibit B there's  
22 no federal nexus associated with the project that would  
23 require NEPA, National Environmental Policy Act,  
24 documents to be developed at this time.

25 Q. Can you describe the existing land uses in the



1 project area?

2 A. (Mr. Morgan) Yes. So the project area, the  
3 existing land use is predominantly agricultural and  
4 vacant.

5 So as you can see on your right screen, R-28,  
6 that green land is all agricultural. And then the white  
7 outside of the buffer and the kind of gray inside the  
8 buffer, that is vacant land. And the purple, that is  
9 residential. So you can kind of see as we've alluded to  
10 in previous sort of discussions here where the  
11 residential clusters are in relation to the project site.  
12 So we have -- let me get my pointer out here.

13 We have this area to the east and we have this  
14 smaller cluster to the northwest.

15 As you can also see in this figure there's also  
16 a 500kV transmission line as we've previously discussed  
17 which bisects the project, and we also have Interstate 8  
18 directly south of the project site as well as a natural  
19 gas line that intersects the project just to the north.

20 Q. Mr. Morgan, what are the future land use plans  
21 associated with this area?

22 A. (Mr. Morgan) Sure. So our land use planning  
23 information was gathered from Pinal County and their  
24 comprehensive plan. And as shown on R-29, which is  
25 figure A-4 from our CEC application, you can see the

1 designated future land use of the project site is  
2 moderate low-density residential. That is the green.

3 And then that is also kind of the dominant  
4 future land use in the project vicinity. Again, this one  
5 is showing a two-mile buffer around the project site that  
6 is that red circle for reference.

7 There are some other designated future land uses  
8 within that two-mile buffer. So that red circle is  
9 high-intensity activity center. That's kind of centered  
10 around the Montgomery Road exit off of Interstate 8.  
11 That's a mixed-use designation from Pinal County that  
12 allows for some industrial, commercial, some kind of  
13 mixed uses.

14 There's also employment, which is that purple to  
15 the southeast. So what you're seeing there if it  
16 extended beyond the boundary, that's actually associated  
17 with the Attesa racetrack that you heard mentioned  
18 yesterday in public comment. So that is just outside the  
19 two-mile buffer to the southeast.

20 CHMN STAFFORD: That's the racetrack, can  
21 you point at that with your laser pointer?

22 MR. MORGAN: Sure. Sorry, it always takes  
23 a second, there's a bit of lag.

24 So as you can see, it's just over two miles  
25 from the project site.

1 CHMN STAFFORD: Thank you.

2 MR. MORGAN: And then also on land use, as  
3 we discussed yesterday, the applicant is currently  
4 undergoing a major comprehensive plan amendment from  
5 Pinal County, and that would change the designation of  
6 the project site from moderate low-density residential to  
7 general public facility/services, which would accommodate  
8 the project development. And with that CPA, the  
9 designated future land use would be consistent with the  
10 proposed use of the project.

11 MEMBER LITTLE: Mr. Chairman.

12 CHMN STAFFORD: Yes, Member Little.

13 MEMBER LITTLE: Is that change proposed to  
14 be just for the property that you guys own? Or anything  
15 around that?

16 MR. MORGAN: Yes, my understanding is that  
17 the subject lands for that CPA application are strictly  
18 the project boundary.

19 MEMBER LITTLE: So technically starting at  
20 your project boundary in every direction would still be  
21 whatever that is, low moderate residential?

22 MR. MORGAN: That is correct.

23 MEMBER FONTES: When is that anticipated to  
24 be complete?

25 CHMN STAFFORD: Who's speaking?

1 MEMBER FONTES: Sorry. It's Member Fontes,  
2 Mr. Chairman. I'm just going back to another question.  
3 I just wanted to know what the schedule is on that CPA.

4 CHMN STAFFORD: Okay. If you could go  
5 through the Chair when you -- before you ask your  
6 question that'll make it a lot easier for the court  
7 reporter to tell who's asking the question.

8 MEMBER FONTES: Understand.

9 CHMN STAFFORD: Thank you. Please proceed,  
10 Member Fontes.

11 MEMBER FONTES: The question is what is the  
12 schedule for the CPA from Pinal County that Member Little  
13 referenced?

14 MR. MORGAN: Sure. So that application's  
15 already been submitted and some of the public process has  
16 been ongoing. And the actual meetings with Pinal County,  
17 so the board of supervisors meeting is anticipated to be  
18 in the fall of this year.

19 And as you may have seen in the project  
20 site, there is already public notice on that site for  
21 those Pinal County public hearings and further notice of  
22 application, so those are all -- those processes are all  
23 ongoing.

24 CHMN STAFFORD: I did notice the big yellow  
25 sign next to the sign announcing this hearing.

1 MR. MORGAN: Yes, many signs.

2 BY MR. MOYES:

3 Q. Thank you, Mr. Morgan.

4 What zoning is associated with this area?

5 A. (Mr. Morgan) Sure. So as you can see on R-30,  
6 we have figure A-3 from Exhibit A of the application and  
7 that shows existing zoning from Pinal County.

8 So the land is currently zoned as general rural,  
9 and that is also the case for much of the surrounding  
10 area, so that is kind of shown in that light gray that  
11 you see on your screen. There are numerous other zoning  
12 designations in the project vicinity. As you can see  
13 there's kind of various zoning categories particularly to  
14 the northeast of the project.

15 But, again, similar to the CPA the project is  
16 also currently undergoing a rezone of the property from  
17 general rural to industrial I-3 to accommodate project  
18 development. And with that rezone the project would be  
19 consistent with Pinal County's zoning ordinance.

20 Q. Are there any other land entitlements or permits  
21 required for this project?

22 A. (Mr. Morgan) No. The project does require the  
23 aforementioned approvals of a comprehensive plan  
24 amendment and zone change from Pinal County. As I said,  
25 those applications were already submitted. They were

1 submitted in May and the approval process is ongoing.  
2 They're on track for -- they're basically a two-hearing  
3 process, so first you heard, by the planning and zoning  
4 Commission which I believe is scheduled for September,  
5 and then the county board of supervisors in October.

6 Q. Mr. Morgan, can you please provide your  
7 conclusion on the compatibility of land use for Project  
8 Bella?

9 A. (Mr. Morgan) Yes. The existing land use of the  
10 project area is predominantly vacant land surrounded by  
11 agricultural and moderate low-density uses.

12 The project area includes existing linear  
13 infrastructure, including an existing 500kV transmission  
14 line that bisects the project, the natural gas line that  
15 crosses the northern portion of the site, and  
16 Interstate 8 which travels directly to the south of the  
17 project site.

18 Due to that existing infrastructure in the area,  
19 the project is compatible with the existing and future  
20 land use in the project vicinity.

21 MEMBER GOLD: Mr. Chairman.

22 CHMN STAFFORD: Yes, Member Gold.

23 MEMBER GOLD: So if I understood you  
24 correctly, Mr. Morgan, the reason you chose this location  
25 and not some vacant farmland a couple miles away, is

1 because this specific area has transmission lines which  
2 are already in existence which you need for your project,  
3 it has a gas line which is already existing, which you  
4 need for your project, and what else does it have which  
5 you need for your project which would preclude some other  
6 areas more rural?

7 MR. MORGAN: The interstate is also helpful  
8 for construction logistics as well.

9 MEMBER GOLD: Okay. And the interstate.  
10 Did you look at areas within the, say, a 10-mile radius  
11 of this and exclude them for this property?

12 MR. MORGAN: The applicant can speak better  
13 to this, Mark Thompson, the developer. But there were  
14 other sites evaluated. But this particular site had the  
15 conditions that were optimal for project development.

16 Namely, the one that you referenced, the  
17 existing 500kV transmission line, which helps reduce the  
18 need for future additional transmission being built for a  
19 project to interconnect, as well as the natural gas,  
20 Interstate 8, and the ability to get land control over  
21 parcels of private land.

22 MEMBER GOLD: All right. Now, you may not  
23 know the answer to this one, but if you'll just let me  
24 know. If you would run someplace else, say a mile away,  
25 and you had to run a mile of gas pipe and a mile of power

1 lines, how much more expense would that add to this  
2 project?

3 MR. MORGAN: I can't speak to that  
4 directly. But miles of new linear infrastructure would  
5 require a lot of land, a lot of easement, and all of that  
6 can be very costly.

7 MEMBER GOLD: I can't even think of that  
8 either.

9 MR. MORGAN: As well, of course,  
10 construction costs and logistics and things. So that  
11 would be substantially more expensive, I would think.

12 MEMBER GOLD: So if you were refused this  
13 area and you were forced to say, "Hey, look, build it  
14 five miles away," would your company have gone and bid on  
15 a project like this? Or would you have said let somebody  
16 else do it, I can make more profit elsewhere?

17 MR. MORGAN: I can't speak to that. I  
18 think Mark Thompson could probably speak to that as the  
19 developer. I can say --

20 MEMBER GOLD: If this were your company and  
21 you were doing the developing.

22 MR. MORGAN: Well, I can speak to the land  
23 use compatibility, and because of the features that we've  
24 mentioned, it's a site that is prime for this type of  
25 development. And I think it would probably be hard to



1 find an alternative that had similar conditions.

2 MEMBER GOLD: Thank you.

3 BY MR. MOYES:

4 Q. Mr. Morgan, before we move on, would it be true  
5 in your opinion if we were to construct miles of  
6 additional transmission corridor and gas line corridor  
7 that there would be additional substantial environmental  
8 disturbances?

9 A. (Mr. Morgan) Yes, absolutely. And later on as  
10 I speak to biological and cultural resources, we'll touch  
11 on the fact that this is a previously disturbed site, and  
12 of course building new linear infrastructure often  
13 requires much larger habitat impacts, impacts --  
14 potential impacts to cultural resources, things of that  
15 nature.

16 Q. Thank you. Moving on to air. Mr. Westbrook?

17 MEMBER FONTES: Mr. Chairman, I do have one  
18 slight question -- item to clarify, if I could.

19 CHMN STAFFORD: Yes, Member Fontes.

20 MEMBER FONTES: Who owns the 500kV? And  
21 I'm not just talking about the primary owner, but is  
22 there any interested parties who gets co-shared the  
23 physical asset? And could you confirm that?

24 In Arizona oftentimes you've got three  
25 parties owning a physical asset and the capacity on those

1 lines is distinct. I'm just looking for the physical  
2 ownership of that 500kV.

3 MR. MORGAN: I may have to defer that  
4 question until Mark Thompson is back on the stand. I  
5 think we have some other follow-up items that follow a  
6 similar line of questioning, so I think that will be  
7 discussed further at a later time and we can get back to  
8 you with answers on that.

9 MEMBER FONTES: And I did have a question  
10 yesterday on the substation. I know we're doing a POI,  
11 point of interconnect, for SRP. But I also want to know  
12 who the major tenants are there and what that  
13 infrastructure looks like. Because we're getting  
14 multiple jurisdiction in here in the representations  
15 today and I just want to make sure we're clean on those.

16 MR. MORGAN: That sounds good. We will  
17 take that note and we will discuss when Mark is back on  
18 the stand.

19 MEMBER FONTES: Thank you.

20 BY MR. MOYES:

21 Q. Mr. Westbrook?

22 A. (Mr. Westbrook) Yes.

23 Q. Would you please describe the air studies and  
24 analysis that was performed for Project Bella?

25 A. (Mr. Westbrook) Yes, I'd be happy to. So first

1 of all I'd like to talk about the summary of the process,  
2 the air quality permitting process. I'll talk about the  
3 technical studies and discuss some of the air emissions,  
4 air quality impact study for public health, and then talk  
5 about some details of the air permit, including  
6 operational restrictions.

7 So I won't go through every date here on the  
8 slide, but basically the application was submitted in May  
9 of 2023, some time ago, to the Pinal County Air Quality  
10 Control District. For my testimony I'll call them the  
11 District.

12 The application required a lot of supporting  
13 documentation. Requests were sent in from the District.  
14 We had to provide an air dispersion modeling protocol for  
15 the impact analysis. That was supplied and was approved.

16 And eventually the application review process  
17 was completed in February of 2024.

18 Once a draft permit was issued there was a  
19 30-day public comment period. The public was noticed on  
20 the permit, the draft permit. The signs were put out by  
21 the site. And the 30-day period ended with a virtual  
22 public hearing online.

23 At that point in time, the District finalized  
24 the draft air permit, that would go then to EPA for a  
25 45-day administrative review. The reason for that is

1 that the air permit is both a construction approval and  
2 is also a federal Title 5 operating permit. So it had to  
3 go through a 45-day administrative review by EPA. EPA  
4 reviewed the permit and had no objections to the permit.

5 So then finally the final air permit was issued  
6 on June 17, 2024.

7 As far as developing the application, we did  
8 have to put in operational restrictions. I think you  
9 heard from Mr. Thompson yesterday that there was a need  
10 to restrict the facility to a minor source under new  
11 source review or NSR.

12 The reason for that is all of the additional  
13 requirements that you'd have to go through lengthy  
14 process that you get with what's called a prevention of  
15 significant deterioration or PSD permit. So in order to  
16 be a minor source permit out of PSD and also out of the  
17 PM10 particulate 10 micron, which has a lower threshold  
18 because it's a nonattainment area, what we did was we  
19 restricted the assumed operational hours of the plant to  
20 4350 hours.

21 That included 250 hours in startup mode and  
22 75 hours in shutdown mode.

23 It's very important to point out to you that the  
24 reason for this is to be sure that the project can meet  
25 contractual commitments. This is a reliability plant.

1 It's basically going to be called only when needed, so  
2 the expectation is the very worst case, these assumptions  
3 that were restricted just below those thresholds.

4 The actuality is that the plant will operate far  
5 less. But the permitted capacity threshold as  
6 Mr. Thompson said was about 45 percent on annual basis.

7 So in addition to these operational  
8 restrictions --

9 CHMN STAFFORD: Quick question.

10 MR. WESTBROOK: Yes.

11 CHMN STAFFORD: You said the capacity  
12 factor is roughly 45 percent?

13 MR. WESTBROOK: On an analyzed basis.

14 CHMN STAFFORD: And how many stops or  
15 starts is that per unit?

16 MR. WESTBROOK: It's unlimited on starts  
17 and stops per day. But the total duration of starts per  
18 year is 250 hours starts and 75 hours in shutdown mode.  
19 A startup mode could take up to 30 minutes, probably  
20 less. Shutdown mode is about nine minutes.

21 CHMN STAFFORD: Okay. Because there's,  
22 more emissions during the startup and shutdown per time  
23 period.

24 MR. WESTBROOK: Right. So that was the  
25 other part of the restrictions is we do have

1 state-of-the-art emission controls, selective catalytic  
2 reduction per NOx, N-O-X, emissions or nitrous oxides.  
3 We also have oxidation catalysts for carbon monoxide or  
4 CO, and volatile organic compounds, VOCs. So when you're  
5 in a startup mode, this is a very rapid response, fast  
6 startup unit. 30 minutes to assume for a startup is a  
7 very long conservative assessment that we had to use in  
8 permitting.

9                   And as you probably know, vendors don't  
10 want to estimate much lower numbers. They want to make  
11 sure they meet those numbers. So vendor said assume  
12 30 minutes for startup, nine minutes for shutdown.

13                   The ramp is very fast, the control system  
14 ramp is very fast even from a cold start, which is what  
15 these units will be doing. So there will be a short time  
16 of you could say uncontrolled emissions for a few  
17 minutes, probably. Maybe 15 minutes, but then there's a  
18 quick ramp into full control.

19                   CHMN STAFFORD: Those emissions are  
20 tracked; right?

21                   MR. WESTBROOK: Those emission for NOx and  
22 for CO will be tracked on a continuous basis using  
23 continuous emissions monitoring systems or CEMS, for NOx  
24 and for CO.

25                   For the other pollutants fuel is tracked on

1 a continuous basis. Source testing is done completed to  
2 get the emission factors used to track emissions.

3 CHMN STAFFORD: Okay. Thank you.

4 MEMBER FONTES: Mr. Chairman, related  
5 question.

6 CHMN STAFFORD: Yes, Member Fontes.

7 MEMBER FONTES: One of the concerns on the  
8 Coolidge plant is that the permitting studies done prior  
9 to the approval of the plant by the CEC and by the air  
10 emissions are not as resultant, and the monitoring is  
11 different.

12 Did you compare the results that you had  
13 from your studies to Coolidge, and what can you share  
14 with this Committee to inform us that those issues that  
15 have been noted in ADEQ monitoring reports are going to  
16 be addressed ahead of time on this power plant?

17 MR. WESTBROOK: Yes. So we did very  
18 closely compare the air permits for Coolidge, for Copper  
19 Crossing, and other permits in the state of Arizona. The  
20 emission controls and the monitoring systems are  
21 consistent with the approvals in those projects or  
22 better. Because we did note those concerns. We did want  
23 to be sure we have good data in the monitoring process.

24 So we did actually in the public comment  
25 process add additional conditions that voluntary to the

1 requirements of the rules to make sure that we had better  
2 monitoring in place.

3 MEMBER GOLD: Mr. Chairman.

4 CHMN STAFFORD: One -- Member Fontes, you  
5 had another question?

6 MEMBER FONTES: Did you by chance look at  
7 emerging requirements in published Federal Register  
8 notices on planned but yet not implemented requirements  
9 that the current administration has proposed with respect  
10 to air emission quality testing?

11 MR. WESTBROOK: The permit process that is  
12 directed by the District, the Pinal County Air Quality  
13 Control District, is based upon the rules in place at the  
14 time.

15 If new rules come into play in the future,  
16 those could affect the project, but as far as the air  
17 permit process, there are only going to be the rules that  
18 are in place that are effective at the time of the  
19 application and the permit issuance. So anything that  
20 may happen in the future is not included in that process,  
21 but if that side become effective, then that would be  
22 changes in the permit that would have to be made by the  
23 District.

24 MEMBER FONTES: One final question, if you  
25 could. How would hydrogen integration change the air



1 quality with a higher plant temperature on a project of  
2 this nature given the operational characteristics?

3 MR. WESTBROOK: I think you heard yesterday  
4 that there could be a higher NOx emission rate. I don't  
5 have any personal experience with emissions related to  
6 hydrogen at this time. I do understand that was the  
7 testimony yesterday that there could be higher thermal  
8 NOx emissions. If that's the case those emissions would  
9 have to be controlled as we're controlling NOx from the  
10 standard natural gas combustion.

11 But there would be other issues that have  
12 to be looked at. Technically just because you're using  
13 hydrogen doesn't mean you're necessarily reducing  
14 emissions.

15 MEMBER FONTES: Thank you, Mr. Westbrook.  
16 I always appreciate your testimony.

17 MR. WESTBROOK: Thank you.

18 CHMN STAFFORD: Member Gold, you had a  
19 question?

20 MEMBER GOLD: Well, two questions now.  
21 Layman's questions.

22 There was a lot of talk yesterday about  
23 hydrogen. How many years are we away from actually  
24 switching from natural gas to hydrogen, in your opinion?

25 MR. WESTBROOK: I have seen the plans for

1 net zero in different states, especially in California  
2 where I think this has probably become, you know, the  
3 first time I've ever seen in a net zero plan where  
4 utilities are talking about going to zero carbon  
5 emissions.

6 Hydrogen has a definite place in that  
7 carbon sequestration, is being talked about as something  
8 possible but not commercially viable.

9 All the plans I've seen in what appear to  
10 be reliable planning include reliability power plants as  
11 a gap measure until these other technologies develop to  
12 where it can be utilized commercially in a way that makes  
13 sense for the environment.

14 So I would say we're probably -- we're  
15 already seeing some test adoption of hydrogen in major  
16 baseload power plants, where we have much higher  
17 greenhouse gas emissions. Natural gas-fired plants, you  
18 know, those plants could maybe adopt it sooner. They  
19 also may have more of an option for carbon sequestration  
20 depending upon location, a lot of places don't have that  
21 capability.

22 So as far as hydrogen goes, it's probably  
23 going to be 10 to 15 years out before we start to see  
24 more adoption of that into larger power plants.

25 As far as reliability or peaking plants

1 that are very low-run plants, it could be much longer  
2 because it probably doesn't make commercial sense.

3 MEMBER GOLD: So we're talking about decade  
4 or decades away for hydrogen?

5 MR. WESTBROOK: It is, and I think you have  
6 to look at overall mix of, you know, renewables with the  
7 gap, with peaking plants, reliability plants, and the  
8 development of the time it takes for those to become  
9 commercially viable and go to market.

10 MEMBER GOLD: Okay. And natural gas comes  
11 out of the ground pretty much in usable form, whereas  
12 hydrogen you'd have to use a tremendous amount of  
13 electricity to take it out of the sea water and there  
14 would be a whole bunch of, well, let's put it this way, a  
15 couple of decades before we can talk about hydrogen, so  
16 I'm not concerned with that at the moment.

17 Now is my question in layman's terms.  
18 Regarding emissions, these LM6000s are basically jet  
19 engines used in commercial aircraft. Commercial aircraft  
20 run on jet fuel which is basically kerosene. Kerosene is  
21 a lot more polluting than natural gas.

22 Compared to the emissions from, say, Sky  
23 Harbor airport where you have jets taking off roughly  
24 every five minutes, dumping the equivalent of nitric  
25 oxide, carbon dioxide, sulfur and a whole bunch of other

1 junk that you find the kerosene into air. These plants  
2 are running on natural gas which is far cleaner than  
3 kerosene when you put in a jet engine.

4 The pollution from your plant compared to  
5 the pollution -- and now in layman's terms, please don't  
6 go into cubic feet or cubic whatever it is. In layman's  
7 terms, in one day of your plant, will that produce as  
8 much pollution as one jet aircraft taking off, 10 jet  
9 aircrafts taking off? Roughly how does it compare to jet  
10 aircrafts taking off out of Sky Harbor Airport, your  
11 pollution level?

12 MR. WESTBROOK: So one of the factors I  
13 mentioned before is that we have state-of-the-art  
14 controls. So before we even put on the add-on controls  
15 we have as required by EPA we have to lower the emissions  
16 in these gas turbines. The turbines themselves are run  
17 very efficiently.

18 We have the advantage that unlike aircraft  
19 you can create a power plant that runs much lower  
20 emissions because it's in one place. The emission  
21 controls, just the add-on controls themselves are going  
22 to decrease emissions by over 90 percent over a jet  
23 engine burning natural gas, if that would be the case on  
24 an airplane. But like you said the --

25 MEMBER GOLD: Engine is kerosene.

1 MR. WESTBROOK: Yes, and they're also much  
2 less efficient, they're operating under different  
3 operating conditions, temperatures and so forth. Because  
4 we have a static plant, we're starting with a much  
5 cleaner, more efficient plant running similar technology.

6 But there are a lot of things built in that  
7 make the emissions much, much better. Running natural  
8 gas is one of them but the add-on controls that are going  
9 to reduce emissions by 90 percent and also all the other  
10 factors that go on even before those controls, you know,  
11 we could be talking 95 to 99 percent of reduction  
12 emissions over an aircraft type of jet engine.

13 MEMBER GOLD: So compared to people who  
14 live around Sky Harbor or within a couple miles of Sky  
15 Harbor, you're going to be a fraction of a percentage of  
16 the emissions that they would be getting? Is that a  
17 correct assumption?

18 MR. WESTBROOK: Yes, sir.

19 MEMBER GOLD: Thank you.

20 MEMBER LITTLE: Mr. Chairman.

21 CHMN STAFFORD: Yes, Member Little, and  
22 then we have, I believe is that Member Richins on the  
23 line?

24 MEMBER RICHINS: Yes, thank you.

25 CHMN STAFFORD: Let's Little go and then

1 you can ask your question after her. Member Little.

2 MEMBER LITTLE: Thank you. I have a few  
3 questions that occurred to me as I was reading through  
4 the application.

5 And one of them is that there's a statement  
6 on Exhibit B-3 -- I don't see a page number but it says,  
7 "Because the project is located in an area of Pinal  
8 County that is classified as serious nonattainment for  
9 PM10, the modeling analysis demonstrated compliance for  
10 both attainment and nonattainment pollutants."

11 Could you explain that statement, please?

12 MR. WESTBROOK: Yes. So as I mentioned,  
13 the -- one of the technical studies that we completed was  
14 an air quality modeling analysis to compare the emissions  
15 impacts, concentration impacts from the facility to the  
16 national ambient air quality standards, or the NAAQS.

17 This is required by the District for us to  
18 do this. So in doing so, we had to look at whether  
19 these, what they're called are criteria pollutants. They  
20 include NOx, N-O-X, CO, VOCs I mentioned before,  
21 particulate PM10 and the finer PM2.5 micron. SO2, lead,  
22 sulfuric acid I think are all of them.

23 If the area is an attainment of the air  
24 quality standards, then there's not an issue like there  
25 would be if they're nonattainment. Nonattainment meaning

1 the area is already, you saw the dust storms out there  
2 for PM10. We have a PM10 issue in West Pinal County  
3 that's primarily driven by unpaved roadways,  
4 agricultural, dust storms. There's a lot of dust. Okay.

5 But that doesn't mean that the district is  
6 absolved from responsibility. So when a facility is  
7 installed in an area that's nonattainment, you are held  
8 to a higher standard of control.

9 The impact analysis that you do cannot show  
10 as much impact as if it's an attainment area. So in  
11 completing that analysis, all those rules are being used  
12 to come up with results that show we don't cause or  
13 contribute to a problem with the ambient air quality  
14 standards.

15 In the case of PM10, we cannot go over a  
16 fraction of the standard. The fraction is 5 micrograms  
17 per meter cubed. The standard is 150 on a 24-hour  
18 average basis. So you can only do a little bit of an  
19 implement for your plant, and you have to show at the  
20 fence line you do not exceed the standard.

21 MEMBER LITTLE: Okay. That explains it,  
22 because the way this -- the way I read the sentence it  
23 sounds like because it's not attainment we're not going  
24 to worry about it. And that's --

25 MR. WESTBROOK: We have to worry about it.

1 MEMBER LITTLE: -- not at all -- yes. I  
2 guess I was concerned about that as somebody with asthma  
3 who had lived in Pinal County for 25 years.

4 There's also in page 9 of the study in B-3  
5 that says, "Table 4 shows that the project resulted in  
6 impacts exceeding the SILs for PM2.5, MO2 and SO2. Based  
7 upon the results of the significant impacts analysis, and  
8 analysis was conducted for those pollutants with  
9 significant impacts to assess the compliance."

10 I'm not sure I understand that paragraph  
11 either. It sounds like you exceeded SILs. Please just  
12 explain the paragraph.

13 MR. WESTBROOK: Yes. So as I mentioned for  
14 PM10 where we have a nonattainment area, you cannot  
15 exceed what is called a significant impact level. That  
16 fraction, that five microgram per meter cubed in Table 4  
17 cannot be exceeded.

18 When you're doing the analysis for the  
19 other pollutants where we're in attainment, the  
20 significant impact level is a level that establishes your  
21 facility impact only. And if you don't exceed that  
22 level, you don't have to consider other facilities in the  
23 area, the background pollution.

24 But if you do exceed that level you have to  
25 do more. Your analysis has to include all that



1 background, add that with your impacts, and if everything  
2 combined is below the threshold, then you don't cause or  
3 contribute to an exceedance of the standard.

4 MEMBER LITTLE: Okay. So the project  
5 itself resulted in impacts exceeding those SILs, but when  
6 you did the further analysis including everything else,  
7 it was still okay.

8 MR. WESTBROOK: Correct. So when you think  
9 significant impact analysis for this study, it's not the  
10 same as saying that there's a significant impact on  
11 public health.

12 The conclusion of the study is there is not  
13 a significant impact on public health as required by the  
14 District and reviewed by them. This is just a step in  
15 the process to get to that conclusion.

16 MEMBER LITTLE: Even though maybe the  
17 project contributes more than its share.

18 MR. WESTBROOK: The project -- we include  
19 the project contribution combined with those other  
20 thresholds. And like I said, the PM10 is the one that  
21 we're most concerned about. That one's held to a very  
22 low increment, very low fraction.

23 MEMBER LITTLE: Okay. That's all I have.  
24 Thank you very much.

25 MR. WESTBROOK: Thank you.

1 CHMN STAFFORD: Member Richins.

2 MEMBER RICHINS: Yeah, I -- just a point of  
3 clarification. I know Member Gold talked about hydrogen.  
4 There is air products in the building, a hydrogen  
5 generator to produce 11,000 tons per year, literally  
6 about three miles from your site.

7 So hydrogen can be part of the equation.  
8 They're under construction and almost complete, so  
9 they'll be online prior to your guys' being complete.

10 Even if you took some of the generators off  
11 of the natural gas you could lower some of the issues, if  
12 you just ran some of them on hydrogen.

13 So should be a consideration, part of the  
14 conversation. It will be gen -- I think it's about three  
15 or four miles from where your site is located. Thank  
16 you.

17 CHMN STAFFORD: Member Drago, you had a  
18 question?

19 MEMBER DRAGO: Yeah. Thank you,  
20 Mr. Chairman.

21 Thanks, Mr. Westbrook. I understand it's a  
22 complicated subject, the Clean Air Act is not easy.

23 I think what might help the Committee to  
24 understand is the whole notion of a Title 5 majority  
25 source permit. And the approach for doing potential to

1 emit, and a summary about -- like you described a part of  
2 it, for the startup-shutdown of the LM6000 being  
3 conservative for the 30-minute versus a 10-minute ramp  
4 that it does have.

5 I think it would help to couch that  
6 potential to emit estimate and then what your actuals are  
7 and then how you permitted the facility.

8 MR. WESTBROOK: Okay. Sure. So I have up  
9 on the slide the estimated maximum projected emission  
10 levels based upon the assumptions I mentioned earlier.

11 These levels are -- they're based upon the  
12 emission factors that we have from the control systems.  
13 They're based upon the operational restrictions.

14 What we really had to focus on here was  
15 carbon monoxide. When you're going for your construction  
16 permit, as you mentioned, you have to look at the  
17 potential to emit the maximum emissions you could ever  
18 emit in order to get your permit. And you may be  
19 required to put in federally enforceable restrictions in  
20 a Title 5 permit to make sure you don't go over those  
21 thresholds.

22 So what you see here are the maximum  
23 projected emission levels to stay under the major source  
24 threshold for PSD of 250 tons per year of all those  
25 pollutants except for PM10 where the nonattainment area,

1 major source threshold is 70 tons per year.

2           The operation of the plant happens under  
3 all different kinds of conditions. We have, you'll see  
4 in the permit application, a whole long list of  
5 temperatures and conditions and everything we looked at.  
6 Many, many different operational conditions.

7           We took the absolute worst-case maximum  
8 operational condition for air emission calculations  
9 modeling everything. As I said before, very, very  
10 unlikely it's ever going to happen on short-term basis,  
11 and certainly even on an annual basis to get our  
12 potential to emit.

13           Actual emissions are probably going to be  
14 somewhere in the range of 50 percent, 75 percent on a  
15 worst-case day, maybe even 20 percent, 50 percent on an  
16 analyzed basis.

17           So the actual emissions is not something we  
18 are allowed to look at because we have to look at the  
19 worst, worst case. Which we did.

20           And in doing so we were below the major  
21 source thresholds, this is a minor source permit, but  
22 because it does have a federal Title 5 permit, we have to  
23 have these enforceable restrictions that make EPA  
24 comfortable that the plant will stay under those  
25 thresholds and not trigger those levels.

1 And so we have those in the air permit and  
2 I can talk more about those.

3 As far as the startup and shutdown, to  
4 answer your question on --

5 MEMBER DRAGO: Yeah.

6 MR. WESTBROOK: -- that, okay, it's --  
7 we're talking about 30 minutes for startup and the  
8 emissions that are put in are, I wouldn't say they're  
9 uncontrolled for the entire 30 minutes, but I would say  
10 for a good portion of them they are, they're much higher  
11 than I would expect over that period of time.

12 There are certain number of startups  
13 assumed in the year. I think it's like 300 times, 500  
14 times, somewhere in there. But they are going to be  
15 short periods for a simple cycle gas turbine.

16 MEMBER DRAGO: And is it true, though, that  
17 that 30 minutes is very conservative because the LM6000  
18 ramps at 10 minutes?

19 MR. WESTBROOK: It is true that the full  
20 power ramp is within 10 minutes. That doesn't  
21 necessarily mean that the control is going to be there in  
22 10 minutes.

23 We're assuming 30 minutes overall. The  
24 emissions that were given by the vendor, GE, is  
25 conservative in assuming that for a fairly long period of

1 time we're going to have uncontrolled emissions that then  
2 start to become controlled, because what happens is  
3 you're warming up your catalyst, so it's 100 percent  
4 effective. It takes a little bit of time for that to  
5 warm up.

6 MEMBER DRAGO: Thank you.

7 MEMBER KRYDER: Mr. Chairman.

8 CHMN STAFFORD: Yes, Member Kryder.

9 MEMBER KRYDER: Mr. Westbrook, when you  
10 talk about startup and shutdown, normally would the whole  
11 bank of 10 be started at one time or are we talking about  
12 starting two or three as the need requires and then  
13 adding five more and so on? Talk with that a bit,  
14 please.

15 MR. WESTBROOK: I think Mr. Thompson would  
16 have to give you more details on what he thinks could  
17 happen, but I do believe that from what I've seen in  
18 peaking plants, you do have the capability of running all  
19 of them, which is probably going to be the case when you  
20 really need them you're going to run all of them.

21 Because you have a grid emergency or a grid  
22 overload or whatever you want to call it. I don't know  
23 what you want to call it.

24 But you need them. So you need all 10.

25 But you do have the capability of running one, two, or

1 three. You're not going to run them at a reduced load  
2 factor. You're going to run them all the way up, but you  
3 don't have run all 10 if you don't need to. But like I  
4 said, Mr. Thompson could probably talk more about that.

5 MEMBER KRYDER: Very good. I'll wait for  
6 him. Thank you.

7 CHMN STAFFORD: All right. You talked  
8 about 300 starts per year? That's across all ten units,  
9 not per unit; correct?

10 MR. WESTBROOK: That's across all ten  
11 units, correct.

12 CHMN STAFFORD: Okay.

13 MR. WESTBROOK: And I'm looking at the  
14 number now. Yeah, 500 per year was the --

15 CHMN STAFFORD: That's across all the ten.  
16 Okay.

17 MR. WESTBROOK: That is right, and we  
18 assume the maximum of two per day.

19 CHMN STAFFORD: Per unit?

20 MR. WESTBROOK: Per unit.

21 CHMN STAFFORD: Okay.

22 MR. WESTBROOK: All ten units, two per day.

23 CHMN STAFFORD: Okay. All right. Looking  
24 at page 17 of the report, you said the project's  
25 estimated to emit 1,131,266 tons of carbon dioxide

1 equivalents on annual basis.

2 That's based on the same assumptions about  
3 the starts, stops?

4 MR. WESTBROOK: Yes.

5 CHMN STAFFORD: Okay. It says equivalents.  
6 What else are you looking at besides just carbon dioxide?

7 MR. WESTBROOK: Very small amount of  
8 methane. Methane slip, they call it. Most of the  
9 methane is burned, there is a very small contribution of  
10 methane. And also a compound called N2O. And those are  
11 very small fractions of the overall total.

12 CHMN STAFFORD: All right. And then you  
13 said the capacity factor being 20 and 40 percent. And  
14 that limit is set by the air permit; correct?

15 MR. WESTBROOK: 45 percent on annual basis  
16 is the total hours per year at 100 percent load. So when  
17 you look at those hours you assume 100 percent potential,  
18 maximum potential gas. These units will not operate at  
19 exactly 100 percent, they might operate at 80, 85, 90  
20 percent, but that's 100 percent of the fuel being burned  
21 to the maximum rating of that unit. All ten units.

22 CHMN STAFFORD: Okay. And then -- but that  
23 can -- but the capacity factors can vary depending on  
24 number of starts and stops significantly, can't it?

25 MR. WESTBROOK: The capacity factor in



1 terms of hours would -- would vary. If you don't need to  
2 use the plant as much you'd have a much lower factor. If  
3 you use it more, you'd have a higher one but you cannot  
4 go over the fuel usage that's in the air permit for the  
5 whole year.

6 CHMN STAFFORD: So there's like a fuel  
7 usage cap in part of the permit?

8 MR. WESTBROOK: Yes.

9 CHMN STAFFORD: And what is that number?

10 MR. WESTBROOK: I'm going to have to look  
11 that up for you.

12 MEMBER FONTES: Mr. Chairman, it's Member  
13 Fontes. I have an additional item for clarification  
14 after you're done.

15 CHMN STAFFORD: Okay. I'll call on you as  
16 soon as I'm done with this line of questioning.

17 MR. WESTBROOK: I'm sorry. There's way too  
18 many pages in this application on air. I'm trying to  
19 find the actual permit.

20 CHMN STAFFORD: It's in there somewhere.

21 MR. WESTBROOK: Yeah, it's in there. Okay.  
22 I'm almost there.

23 So it's in the permit application, page 6  
24 of the air permit, page 6, 18,844,300 BTUs per year on a  
25 higher heating-value basis.

1 CHMN STAFFORD: You said it's on page 6 of  
2 the permit?

3 MR. WESTBROOK: Of the permit.

4 CHMN STAFFORD: Under what number?

5 MR. WESTBROOK: Let's see. It's under  
6 Section 5, "Emission Limitations."

7 CHMN STAFFORD: I'm looking at the permit  
8 number. You said it's page 6?

9 MR. WESTBROOK: "Emission Limitations."  
10 It's page 6 of the actual air permit. Section 5. Bottom  
11 of page 5, top of page 6.

12 CHMN STAFFORD: Okay.

13 MR. WESTBROOK: Right before "NSPS Emission  
14 Limits."

15 CHMN STAFFORD: That's why I couldn't --  
16 okay.

17 MR. WESTBROOK: It kind of went under a  
18 different page.

19 CHMN STAFFORD: Okay. Yeah. So it's 526,  
20 okay, I see it, it's right -- it's the 18,844,000 MM BTU  
21 across 12 months. That's what you're talking about?

22 MR. WESTBROOK: Yes.

23 CHMN STAFFORD: Okay. No wonder why --  
24 it's at the top. I just couldn't find a number 5 on  
25 page 6. That's what it was. Okay. Thank you.

1                   And then, so the federal, was it 40 CFR  
2 part 60, has -- was it 1170 pounds per CO2 for megawatt  
3 hour. That's the gross requirement? And this would emit  
4 at 160 pounds per MM BTU? What does that translate to in  
5 terms of megawatt hours?

6                   MR. WESTBROOK: I'd have to get that number  
7 for you. I don't have that.

8                   CHMN STAFFORD: Okay. I'd like to --  
9 because the requirement is 1170 pounds per megawatt hour,  
10 but then the -- I'm looking at page 17 of the report. It  
11 says the emission -- you'd have a -- the project is going  
12 to have an emission rate of 160 pounds per MM BTU. I  
13 just wanted an apples-to-apples with the per megawatt  
14 hour.

15                   MR. WESTBROOK: On the 160?

16                   CHMN STAFFORD: Right. Right. And then I  
17 think Member Fontes, you had a follow-up question now?

18                   MEMBER FONTES: I did. Thank you,  
19 Mr. Chairman.

20                   My question gets into the study and the  
21 methodology for the baseline for the how you take the,  
22 for instance, the annual measurement for SOx, NOx,  
23 particulates with respect to calculating.

24                   You state -- and here's my issue or concern  
25 is it's going to be operated as a peaker plant; right?

1 And those are typically in the state of Arizona and  
2 particularly the state of air grade in Pinal County that  
3 the air quality index is very high on those days that  
4 you're going to run a peaker. Those are summer months.

5 How can you describe for this Committee and  
6 the public to inform them that you're not just using an  
7 average of all the years, but you're looking at the  
8 average of those dates that you are stating that it's  
9 going to be operationally used?

10 MR. WESTBROOK: In terms of the air quality  
11 modeling impacts?

12 MEMBER FONTES: Yeah.

13 MR. WESTBROOK: Okay. So as I mentioned,  
14 the emissions are worst case. There are different  
15 averaging periods for emissions: one-hour average,  
16 14-hour average, annual average. Depending upon the  
17 pollutant and depending upon the standard.

18 When we run the modeling we're using five  
19 years of actual meteorological data. We are looking, a  
20 lot of data, we're looking at a lot of hours and in  
21 running that information we're running to find the  
22 maximum hour, day, or year of those five years of data,  
23 here we have maximum impacts on the fence line with all  
24 of these very, very worst-case conditions.

25 So, for example, for the NO2 one-hour

1 impact, we're looking at those startup periods where  
2 there may be fewer controls.

3 Very, very unlikely that we're going to see  
4 those kinds of impacts, but we're required to run those  
5 very high emissions.

6 For 24-hour average we're assuming all 10  
7 plants at the maximum possible fuel use for 24 hours  
8 straight. Could happen. Pretty unlikely it's going to  
9 happen. So the likelihood that the plant is going to  
10 operate exactly when the air conditions are worst, it  
11 could happen but it could -- it's very unlikely that  
12 you're going to find that nexus, that crossover.

13 MEMBER FONTES: So to address the public  
14 concerns on an unhealthy air day in Pinal County when we  
15 know we have alerts all over the state, does that  
16 modeling incorporate that, because that's when you're  
17 going to run the peaker plant because everybody's going  
18 to want the air conditioning. Does that modeling  
19 incorporate that?

20 MR. WESTBROOK: It does incorporate to the  
21 extent that because we're using historical data, if those  
22 dates were included in that past data, and I don't know  
23 if they were. But if they were then that would be  
24 included.

25 We're not projecting forward and looking at

1 other dates. But we are including all the actual  
2 meteorological data from five years in the analysis.

3 MEMBER FONTES: Is that five 365-day years  
4 or five years of data on the plant usage of the peaker  
5 plant? That's what I was trying to get at. Because,  
6 again, peaker plants are typically fired in summer  
7 peaking capacity and on shoulder years, let's call it  
8 September, and those are the days that we have the higher  
9 air quality. So presumably that's going to have a  
10 different baseline than if you spread it across five  
11 years of historical data. That's what I'm trying to get  
12 at. Can you educate us on that?

13 MR. WESTBROOK: It is running the five  
14 years, 365 days per year, 24 hours per day of hourly data  
15 for all periods in those periods. Depending upon the  
16 pollutant, PM10, PM2.5, or 24-hour average, we'd be  
17 looking at five years of daily averages for the annual  
18 average.

19 For PM2.5 we're looking at the five  
20 separate averages. And we're running the modeling based  
21 on the requirements that EPA has for such a study. So we  
22 have a lot of data that goes into this analysis.

23 MEMBER FONTES: Understand. But how is the  
24 profile different in those months of the peaker for the  
25 items of concern, the NOx and CO2 in particular?

1 MR. WESTBROOK: I think that the profile,  
2 the actual profile of how it's going to run is not a  
3 consideration because we're assuming that it could be  
4 running when it wouldn't be running, you know, the hours  
5 of the year at nighttime.

6 So we're using possibly hours that it would  
7 never be run and therefore it's a much more conservative  
8 analysis by doing that. And like I said, we're including  
9 days when there could be worse air quality in the past.

10 So I think we have a very large set of  
11 results in terms of looking at the worse-case impact. I  
12 don't know if I answered you question.

13 MEMBER FONTES: I'm still contemplating the  
14 answer here. But for now, I'm satisfied. Thank you, and  
15 thank you, Mr. Chair.

16 MR. WESTBROOK: Thank you.

17 CHMN STAFFORD: Thank you, Member Fontes.

18 MEMBER GOLD: Mr. Chair.

19 CHMN STAFFORD: Yes, Member Gold.

20 MEMBER GOLD: This again is for

21 Mr. Miller -- I'm sorry, Mr. Westbrook.

22 Regarding these pollutants assuming your  
23 plant is running at night and, you know, this is in tons  
24 per year which is really hard for me to fathom. Let's  
25 take a look at the people working at the plants and the

1 people who live in the area of the plants.

2 Nitrous oxide is probably not good to  
3 breathe in. Carbon monoxide is not good to breathe in.  
4 The other stuff is not good to breathe in.

5 How will this affect plant workers? How  
6 will this affect -- I mean, what quantities are we  
7 talking about? Will they have an effect on the people  
8 who live in the area, the people who work at the plants,  
9 compared to people who live in San Francisco or Los  
10 Angeles or New York where you have high levels of this  
11 stuff? What it's going to be like, what's the  
12 environment going to be like when these turbines go on at  
13 night regarding the people's health?

14 MR. WESTBROOK: Right. So National Ambient  
15 Air Quality Standards are protective of public health and  
16 also agriculture, public welfare. That's why they were  
17 set in purpose.

18 The fact that we're required to do the  
19 modeling and the fact we show that there's not a  
20 significant impact means that there will not be a harm or  
21 an impact to public health. There won't be any impact  
22 from this facility based upon that study. And that was  
23 required to be done by the Pinal County Air District.  
24 They reviewed and approved it and agree with that  
25 finding.



1 MEMBER GOLD: So that means it's going to  
2 be safer to work in this plant, to live in this area,  
3 regarding nitrous oxide and carbon monoxide and sulphur  
4 dioxide than it is in living in New York City or  
5 San Francisco or Los Angeles; is that correct?

6 MR. WESTBROOK: I've not made that  
7 comparison before, and I can't opine on the difference in  
8 overall air quality. I've just been focused on Project  
9 Bella.

10 MEMBER GOLD: Well, compared to overall air  
11 quality because, you should be familiar with air quality  
12 standards in cities --

13 MR. WESTBROOK: Right.

14 MEMBER GOLD: -- I mean, in your opinion  
15 would you rather be working at this plant than working in  
16 New York City outside?

17 MR. WESTBROOK: I do have quite a bit of  
18 experience working in the Los Angeles area.

19 MEMBER GOLD: Okay.

20 MR. WESTBROOK: Permitting and modeling and  
21 so forth, in an area that is the most polluted area in  
22 the country including for particulates and things of  
23 concern. Based upon my understanding of the background  
24 air quality, the air quality is better here. We do have  
25 the issue of PM10 nonattainment. On certain days it can

1 be really fast, as I said from dust storms like today.  
2 But generally the air quality is much better than some  
3 areas, yes.

4 MEMBER GOLD: So the emissions from this  
5 plant would still make the air quality here better than  
6 most cities in the country?

7 MR. WESTBROOK: It would not have  
8 necessarily an impact on the air quality here, but I  
9 think the overall experience living here would be better  
10 than living in other urban areas, yes.

11 MEMBER GOLD: Even with the plant running?

12 MR. WESTBROOK: Even at the plant running.

13 MEMBER GOLD: Thank you. That's all I  
14 wanted to know.

15 CHMN STAFFORD: The PM10, that's the most  
16 problematic pollutant for Pinal County; correct?

17 MR. WESTBROOK: Correct.

18 CHMN STAFFORD: And that's largely driven  
19 by kicking up dirt, isn't it?

20 MR. WESTBROOK: Unpaved roads are probably  
21 70 to 80 percent. You know, there's a lot of unpaved  
22 roads in the area. And the monitors are typically placed  
23 in areas that are closer, Casa Grande, they're in areas  
24 where there's a lot more urban activity or agriculture  
25 going on, so the monitors that they put in place to find

1 these things out are going to be impacted by those types  
2 of sources.

3 CHMN STAFFORD: I seem to recall that in  
4 the Coolidge expansion for SRP, they ended up paving  
5 several of the unpaved roads near the site to reduce on  
6 the amount of PM10. Has the applicant explored what  
7 roads near the project could be paved to provide a  
8 benefit to the surrounding area for reduction in PM10?

9 MR. WESTBROOK: I'm not aware that that's  
10 been explored, no.

11 CHMN STAFFORD: I did notice that the Selma  
12 Highway was unpaved when we went on the tour. And that's  
13 why I asked them about where the traffic for construction  
14 would be. It would be down the paved roads of the 8 and  
15 Midway.

16 But I'm just curious, have you -- has  
17 anybody looked at, seems like there are several other  
18 ones. I can't recall if Peters was paved or not, but it  
19 seems like there's a fair number of roads in this area  
20 that are unpaved that perhaps if they were paved we could  
21 help mitigate the impact of the PM10. I realize that  
22 probably most of the PM10 is going to come from the  
23 construction of the plant more than its operation.

24 MR. WESTBROOK: The construction of the  
25 plant does have to have a dust control permit in West

1 Pinal County that requires watering, reducing disturbed  
2 soils, making sure that the potential for dust is  
3 reduced. So their construction cannot occur without that  
4 specific construction permit, so that does help to cover  
5 mitigation from that process.

6 The plant itself, I would imagine from my  
7 understanding of these kinds of power plants have a very  
8 low amount of employees, and as far as traffic into the  
9 local area to that plant would be very small.

10 The air quality analysis itself shows  
11 insignificant impacts, and so based upon that there was  
12 not a requirement to mitigate emissions and impacts of  
13 PM10.

14 CHMN STAFFORD: Right. I know it's not a  
15 requirement but I'm just talking about what reasonable  
16 conditions this Committee might want to impose on the  
17 project to make it more palatable to the surrounding  
18 area.

19 So I just wanted to let the applicant chew  
20 on that for a minute, I think, to see if there's  
21 something that they could be doing more than that's  
22 actually required to mitigate the impacts.

23 Member Drago.

24 MEMBER DRAGO: Yeah, if I may. In addition  
25 to what Mr. Westbrook said about dust control permits.

1 Because this area is nonattainment for particulate  
2 matter, 10 microns or less, there is what they call a  
3 state implementation plan, a SIP, and that SIP is written  
4 for all areas of nonattainment in the United States.

5 And in that SIP, compare it to the control  
6 measures that Mr. Westbrook is talking about at the point  
7 sources at the plant. The SIP looks at overall control  
8 measures in the area that is not attaining the public  
9 health standards. And in those SIPs, a lot of times  
10 you'll see one of the control measures is to pave roads.

11 So I would think that if we wanted to bring  
12 in Pinal County Air Quality to talk to us, they could  
13 probably explain what control measures are in that state  
14 implementation plan for this nonattainment area.

15 MR. WESTBROOK: Yes, that's correct.

16 CHMN STAFFORD: Please continue with your  
17 presentation. I think that's it for Member questions for  
18 the time being.

19 MR. WESTBROOK: Yes. I think we were  
20 talking about the emission limitations, we discussed the  
21 fuel limit.

22 And Mr. Thompson mentioned yesterday that  
23 while we have the 250-ton-per-year threshold, we are  
24 required by the district to limit emissions to 90 percent  
25 of those thresholds, okay, so that's for criteria

1 pollutants, which are the ones we modeled.

2 Also other hazardous air pollutants under  
3 Title 5 that are required to be looked at here, the HAPs,  
4 hazardous air pollutants, 90 percent of the threshold,  
5 because that gives more assurance that we will not exceed  
6 those thresholds.

7 That's a requirement that you don't see  
8 everywhere. You do see it in Arizona. So that was a  
9 limitation that is in the permit as enforceable  
10 conditions.

11 As far as how we make sure we meet those  
12 conditions, we talked about the SIMS monitoring, stack  
13 testing that's required to determine what the actual  
14 emissions are coming out of these units once they're  
15 built. Because we're making assumptions on that, so we  
16 want to have actual data on that tracking.

17 The fuel has to be tracked ongoing.  
18 Emissions calculated and tracked ongoing, every single  
19 month they have to be accumulated, and on a 12-month  
20 rolling basis you have to show that you're not exceeding  
21 those thresholds for the permit requirements.

22 As a Title 5 permit they're going to be  
23 reporting going on twice a year with an annual emissions  
24 report required to the District. So there's a lot of  
25 tracking and monitoring required by the agency, EPA, and

1 by the rules and regulations put in force.

2 MEMBER HILL: Mr. Chair, I have a question.

3 CHMN STAFFORD: Yes, Member Hill.

4 MEMBER HILL: I don't know a lot about air  
5 quality. And this actually may be a question for  
6 Mr. Thompson. But if the air quality permit is limited  
7 roughly to 500 starts a year, it is just peaking, why do  
8 we need 10 units?

9 It just feels like it's an overbuild for  
10 what you can do under the air quality permit. And I just  
11 don't really understand the 10-unit need at this point.  
12 This is what I'm struggling with. I mean, the cost  
13 eventually is borne by ratepayers and I just want to  
14 understand the overbuild potential.

15 CHMN STAFFORD: I think it's for the  
16 capacity because it's the capacity to generate the power  
17 at any given time as --

18 MEMBER HILL: You're going to fire all 10  
19 units when you need it.

20 MR. WESTBROOK: Yeah.

21 MEMBER HILL: But it might be 50 days a  
22 year.

23 CHMN STAFFORD: But these aren't going to  
24 go into rate bases. They only get passed on to  
25 ratepayers if the power's actually generated. Because

1 they're not paying for the capacity. They're only going  
2 to pay for the energy.

3 MEMBER HILL: The energy coming --

4 MR. WESTBROOK: Well, I guess --

5 MEMBER HILL: Whatever the power purchase  
6 agreement is.

7 CHMN STAFFORD: Because we don't really  
8 have a capacity market in this state, really, do we? I  
9 mean --

10 MR. WESTBROOK: I cannot answer that  
11 question, but I do know that when they're needed they're  
12 really needed.

13 CHMN STAFFORD: Right. But it's SRP, TEP,  
14 ED3, someone's going to pay you for the energy. I guess  
15 you could structure the agreement to where --

16 MR. WESTBROOK: You have the capacity.

17 CHMN STAFFORD: -- you have the capacity  
18 that's on standby, but --

19 MEMBER HILL: And you're probably paying  
20 more for that standby because, yeah, I'm just questioning  
21 the size of the facility and thinking about the  
22 limitations under the air quality permit. And maybe,  
23 maybe when you design the facility you thought your air  
24 quality permit might look a little bit different, and so  
25 maybe you're evaluating those things, but I'd like to



1 kind of understand the thinking on that.

2 At the end of the day, you guys have to  
3 figure out how to pay for this. It's going to be  
4 through -- largely through power purchase agreements, and  
5 that cost will be borne by ratepayers.

6 And so I'm just -- I'm just listening. I  
7 don't really ask questions about air quality stuff, but  
8 this is dawning on me, and so I just wanted to put that  
9 on the record and ask applicants maybe to talk about that  
10 a little bit.

11 MR. WESTBROOK: That would be a question  
12 for Mr. Thompson.

13 MEMBER FONTES: Mr. Chairman, if I could  
14 add to that.

15 CHMN STAFFORD: Yes, Member Fonte.

16 MEMBER FONTES: APS and SRP in their  
17 filings, they were only doing 300 starts per year for  
18 their peakers. Just to note.

19 CHMN STAFFORD: Thank you.

20 MR. WESTBROOK: I really have nothing else  
21 to provide for you today. So if you have more questions?

22 CHMN STAFFORD: Anything further from  
23 Members?

24 (No response.)

25 CHMN STAFFORD: Mr. Moyes.

1 MR. MOYES: Thank you, Mr. Westbrook.

2 Let's move on to our water testimony with Mr. Miller.

3 BY MR. MOYES:

4 Q. Mr. Miller, as you previously testified you were  
5 hired by the project to provide analysis regarding  
6 potential water impacts from the project. Can you first,  
7 before you describe those impacts, give us a general  
8 overview of the regulatory scheme governing groundwater  
9 usage in Pinal County and how that relates to this  
10 specific project area?

11 A. (Mr. Miller) Sure. I'd be happy to. So the  
12 regulatory scheme that regulates groundwater use in the  
13 area basically was born with the package of the  
14 Groundwater Management Act in 1980.

15 That particular act at the time basically came  
16 up with what are called active management areas. And so  
17 we sit within what's called the Pinal active management  
18 area.

19 The active management areas are areas where  
20 there have been significant historical groundwater use,  
21 and so there was a need identified to actively manage  
22 groundwater in those areas, so that management is done  
23 through several regulatory programs regulated through the  
24 department of -- Arizona Department of Water Resources.

25 And those regulatory programs are designed to

1 meet certain goals. In the Pinal AMA, the management  
2 goal is to allow development of nonirrigation uses while  
3 preserving agricultural economies for as long as  
4 feasible.

5 And there are certain different regulatory  
6 programs that would apply to groundwater use for the  
7 project.

8 For example, in order to pump a well more than  
9 35 gallons per minute within the Pinal AMA, you have to  
10 legal right to withdraw groundwater. And some examples  
11 of those rights include irrigation grandfathered rights,  
12 those are rights that would be used currently that are  
13 used currently for agricultural uses.

14 There's Type 1 water rights, Type 2 water  
15 rights, and there's also recovery of long-term storage  
16 credits. Those are all different water rights that can  
17 be used to pump groundwater within the AMA.

18 There are also limits on how much you can pump  
19 from a given well, so that the department requires that  
20 when you permit a new use of groundwater that you are  
21 limited in the annual amount that you can pump from a  
22 well based on the calculated impact to nearby existing  
23 wells of record which would be any water production wells  
24 including residential wells and other nonexempt wells  
25 which would be other large wells such as agricultural

1 wells.

2 CHMN STAFFORD: Quick question. So  
3 residential wells are exempt, right, unless they pump  
4 more than 35 gallons a minute.

5 MR. WESTBROOK: That is correct, which  
6 means they're exempt from reporting. They're also exempt  
7 from this requirement to have a water right to withdraw  
8 water from the aquifer.

9 CHMN STAFFORD: Now, what does that mean?  
10 I mean 35 gallons per minute doesn't seem like a lot.  
11 What's -- can you put a perspective by giving us some --  
12 I mean, what is a typical household, what's -- well, what  
13 kind of, I'm going to say pump and permit, what kind of  
14 draw are we talking about?

15 MR. WESTBROOK: So 35 gallons per minute is  
16 basically more than what a typical household would need.  
17 I'm going to do a quick conversion on the fly here, but a  
18 typical house might use say a third of an acre foot of  
19 water per year, and that's approximately -- yeah, that's  
20 approximately 0.2 acre -- excuse me -- gallons per  
21 minute.

22 CHMN STAFFORD: Okay. So --

23 MR. WESTBROOK: So I'm sorry, I might have  
24 done that conversion wrong. But 35 gallons per minute is  
25 definitely more than what a typical household would need

1 in a year.

2 CHMN STAFFORD: Okay. And then what kind  
3 of -- what kind of use would you see for 35 -- could you  
4 operate any kind of business that uses -- I guess, what  
5 kind of activities would 35 gallons a minute support?

6 I mean, obviously agricultural isn't going  
7 to be one of them.

8 MR. WESTBROOK: Correct. A typical  
9 agricultural use, we talked about some of those numbers  
10 yesterday. Some of the questions revolved around that.  
11 Typical agricultural use may be something like four acre  
12 feet per acre applied to land. And so if you have one,  
13 let's say one acre of land and you apply four acre feet  
14 for that acre, that's four acre feet of water per year.  
15 It's much more than what a typical residence would use.

16 CHMN STAFFORD: Okay.

17 MR. WESTBROOK: And that's just one acre.  
18 Typically farms are much, much larger than one acre, as  
19 you know.

20 CHMN STAFFORD: Okay. Now you have, since  
21 this is an active management area, are all the water --  
22 are all of the wells at least tracked so the department  
23 knows of their existence even if they're exempt? I mean,  
24 they know where all the nonexempt and exempt wells are  
25 located?

1 MR. WESTBROOK: So annual reporting is not  
2 required for the exempt wells. However, the department  
3 does track the locations of all of the exempt wells and  
4 so they have, because they're such a low water use  
5 compared to the nonexempt wells, they do estimate how  
6 much water is used by the exempt wells, but those -- that  
7 amount of water is not tracked by the Department of Water  
8 Resources.

9 CHMN STAFFORD: All right. But the  
10 existence of the exempt wells is tracked but obviously  
11 their output is not tracked.

12 MR. WESTBROOK: Correct.

13 CHMN STAFFORD: But do they track if any of  
14 those exempt wells run dry, for example? If they -- and  
15 their depths?

16 MR. WESTBROOK: So, well registration in  
17 Arizona is basically self-reporting, so the owners of the  
18 wells will report their information to the Department of  
19 Water Resources including the depths of their wells and  
20 the construction, the diameters of the casing and casing  
21 materials and whatnot.

22 In terms of when particular wells go dry,  
23 that is something that is studied by the Department of  
24 Water Resources as part of some of their hydrologic  
25 studies. But it's not something that's typical -- until

1 a particular well owner reports that to the Department of  
2 Water Resources, there isn't, you know, there isn't a  
3 meter or an alarm that goes off when that occurs.

4 CHMN STAFFORD: So if someone's well runs  
5 dry they'd have to report to it DWR, otherwise DWR won't  
6 know?

7 MR. WESTBROOK: Correct.

8 CHMN STAFFORD: Okay. Mr. Moyes, there's a  
9 couple new pages here on the table. Are these some new  
10 exhibits? I think one of them here is the summary, I  
11 guess, is already included in the presentation.

12 MR. MOYES: Yes, Mr. Chairman.

13 CHMN STAFFORD: But the additional slide  
14 showing the wells, is this new?

15 MR. MOYES: We do have a few additional  
16 slides that are included in the original exhibit  
17 submission which we will ask to admit at the end, normal  
18 course.

19 And some of the visuals that you'll see on  
20 this screen, anything that is new today in terms of a new  
21 slide or a new outline we've provided printed hard copies  
22 as well.

23 CHMN STAFFORD: But that's already, L35 is  
24 already there, that's not new; right?

25 MR. WESTBROOK: That's correct.

1 CHMN STAFFORD: But these two ones that you  
2 had, the water resources summary and the map, those are  
3 new?

4 MR. MOYES: That's correct.

5 CHMN STAFFORD: Okay. Are they going to  
6 be, I guess I'll let you go through and present them how  
7 you plan to, so --

8 MR. MOYES: Yes. We will at the end of the  
9 proceedings admit any new exhibits as well as the ones  
10 that were previously submitted and figure out the  
11 numbering at that point.

12 I just wanted to ask with your permission  
13 if there are any other questions from the Committee at  
14 the moment.

15 MEMBER GOLD: Mr. Chairman.

16 CHMN STAFFORD: Yes, Member Gold.

17 MEMBER GOLD: This is for Mr. Miller.

18 Your plant is now up and running for a year  
19 and the water table, the aquifer, you've been draining a  
20 little bit of water from the aquifer and everybody else  
21 is draining water from the aquifer for the farms and  
22 everything else.

23 How much will your water use lower the  
24 level of the aquifer in feet or inches?

25 MR. MILLER: Well, actually the answer to



1 that question, it would be helpful to see one of the new  
2 slides. The map, you have a hard copy of it in front of  
3 you and that's the map that shows the contours of impact.  
4 So it would be helpful to refer to that to answer your  
5 question.

6 I'm sorry. In your question you mentioned  
7 that there's been some use existing. I wasn't sure what  
8 you were referring to.

9 MEMBER GOLD: I'm referring to something  
10 very simple. We have an aquifer. You're going -- your  
11 wells will go eight, 900 feet, you reach water at a  
12 certain level, and you should know what level you reached  
13 water at.

14 If you're running for one year, how much  
15 would you lower the aquifer? Simple question.

16 MR. MILLER: Yes. So it's a simple  
17 question, but there's a lot that goes into the analysis  
18 to come up with that. The Department of Water Resources,  
19 as I mentioned, regulates the amount of drawdown that you  
20 can have on neighboring wells of record. And so we did  
21 an impact analysis that follows that standard. It's  
22 written in Arizona Administrative Code rules.

23 And so that standard is after five years of  
24 pumping at the maximum annual volume that the maximum  
25 impact you can have on any neighboring wells of record

1 can be 10 feet or less. So we did that analysis, and on  
2 the graphic you have in front of you can see impact  
3 contours from an impact analysis.

4 So we had run that --

5 CHMN STAFFORD: Hold on a second. These  
6 are the new exhibit. Do you want to mark them so we can  
7 refer them? Which one is going to be 21 and which one's  
8 going to be 22?

9 MR. MOYES: We can mark this new map on the  
10 right as PCE-21, Mr. Chairman. And the summary on the  
11 left as PCE-22.

12 CHMN STAFFORD: Thank you. Please proceed.

13 MR. MILLER: So what you see on the map is  
14 at the end of five years of pumping at the maximum  
15 pumping volume of 540 acre feet per year for the project  
16 that the impact contours of drawdown of three feet, four  
17 feet and five feet are shown on the map.

18 The standard is 10 feet, and so we -- that  
19 amount of drawdown. The contour's so small that we  
20 didn't actually draw it and show it on the map. And so  
21 what we're demonstrating here is that the exact is far  
22 less than the 10-foot standard in any nearby wells.

23 MEMBER GOLD: So your effect on the aquifer  
24 would be in inches over a five-year period.

25 MR. MILLER: That is correct.

1 MEMBER GOLD: Which means your use should  
2 not affect anybody, any local person's well.

3 MR. MILLER: That's correct. And  
4 furthermore, the -- this impact analysis does not take  
5 into account the fact that this, the incremental impact  
6 and any increase in groundwater pumping, we're not  
7 accounting for that here. This is the annual maximum use  
8 for the project.

9 There is an existing use here on the  
10 property, as you know, with the current agricultural use  
11 that will be replaced by the project. So the actual  
12 impact would be less than what's shown here.

13 MEMBER GOLD: Okay. So as I'm looking at  
14 your figure, current use, projected use, maximum modified  
15 use, let me look at the location, R35.

16 You use a fraction of the water of any of  
17 the farms in the area, and I'm guessing that that well on  
18 Midway Road is what the previous farmer used. That is  
19 correct; right? He used water from that well.

20 MR. MILLER: The previous farmer obtains  
21 his water from the Maricopa-Stanfield Irrigation and  
22 Drainage District, and the district manages the water use  
23 for all of the agricultural uses within the district.

24 And so specific withdrawals of -- well, the  
25 actual use can come from a variety of sources including,

1 historically there's been CPA water used on a lot of the  
2 farms, and in more recent years including in 2023 there  
3 was not excess CAP water available for the farms, and so  
4 a lot of the water for the farms came from pumping of  
5 wells in the area.

6 But the -- that entity manages all of the  
7 groundwater pumping and other sources of water as a whole  
8 for all of the farms within the district.

9 MEMBER GOLD: So I'm looking at an image,  
10 again, layman's terms. That green circle which  
11 represents the well on your property on Midway Road, when  
12 you start using water from that well or from CAP or  
13 wherever you're going to use water, will that circle get  
14 larger, smaller, or stay the same?

15 MR. MILLER: If we could go back to that  
16 graphic, that would be helpful.

17 CHMN STAFFORD: You are talking slide R35;  
18 right, Member Gold?

19 MEMBER GOLD: Correct. R35.

20 MR. MILLER: Correct.

21 CHMN STAFFORD: Not PCE-21.

22 MR. MILLER: What you can see on that  
23 graphic, do you want me to wait for it to come up on the  
24 screen? Okay.

25 MEMBER GOLD: There seems to be a lag.

1 MEMBER RICHINS: For those of us playing  
2 the home game can you reference where we might find this  
3 exhibit? I'm not seeing it in my stuff.

4 CHMN STAFFORD: PCE-21 was just brought in.  
5 Have you e-mailed that to Tod?

6 MR. MOYES: I don't think we have yet, but  
7 we will right now in the background.

8 CHMN STAFFORD: Okay. Yeah, they're going  
9 to -- well, we're coming up on the noon hour here so it  
10 seems like any conversation regarding an exhibit that the  
11 three members online can't see, it's going to have to be  
12 repeated anyway after they receive it. So I think let's  
13 take our lunch break and then get those exhibits to the  
14 members online, so they'll be able to see what we're  
15 talking about, and then we can address it then. I  
16 understand some members have some other obligations going  
17 on, so we're going to take our lunch break and come back  
18 at 1:30. We stand in recess.

19 (Recess from 12:02 p.m. to 1:32 p.m.)

20 CHMN STAFFORD: All right. Let's go back  
21 on the record, Mr. Moyes.

22 BY MR. MOYES:

23 Q. Mr. Miller, we were working on your water  
24 testimony. I believe you were in the process of  
25 answering a question from the Committee about residential

1 well impacts. If you would please resume your testimony  
2 where you left off, if you can.

3 A. (Mr. Miller) Yeah, as you recall I was doing a  
4 calculation on the fly to address that question. And  
5 essentially the calculation that I did was correct. The  
6 amount of water that a home typically uses in a year is  
7 roughly a third of an acre foot per year. And that  
8 converts to an average water use over the course of a  
9 year of 0.2 gallons per minute.

10 Which is, you know, the long-term average over  
11 the course of a year. However a home may need more than,  
12 say, 10 gallons per minute at any one time if all the  
13 faucets are running and whatnot. So a  
14 35-gallon-per-minute well to address that question is  
15 more than enough for a residence.

16 Q. Mr. Miller, we've been talking a lot about the  
17 historic usage of the well that will be used for this  
18 project and the data that was provided in the application  
19 in exhibits highlights 2023 year reports.

20 Can you shed some additional light on the other  
21 years leading up to that and how they may differ from the  
22 current data?

23 A. (Mr. Miller) Yeah, I'd be happy to.

24 The property uses a mixture of rights as I  
25 discussed, groundwater being one of them.

1 The property has been actively irrigated since  
2 2018, so for that six-year period, 2018 through 2023, the  
3 average total use for agriculture on the property was 622  
4 acre feet per year.

5 And the average groundwater use for that period  
6 was 371 acre feet per year. But largely what has  
7 occurred in the earlier years within that period a  
8 greater portion of the water used came from excess CAP  
9 water. Central Arizona Project water, which is -- which  
10 isn't as available anymore. And, in fact, in 2023 the  
11 CAP water use was zero.

12 And we do know that because this property has  
13 irrigation grandfathered water rights, that the farm was  
14 active in the period in the leading up to the Groundwater  
15 Management Act in 1980 when water rights were  
16 established. So we know that in the late '70s that the  
17 farm was active. We just don't have estimates of the  
18 irrigation use. They're not available in standard ADWR  
19 records.

20 Q. But isn't it true, Mr. Miller, that to have a  
21 grandfathered irrigation right, that landowner had to  
22 establish a historic average use in order to obtain that  
23 permit which would be reflected in the amount that the  
24 grandfathered right was granted for?

25 A. (Mr. Miller) That is correct. That 2018 to

1 2023 period, the allocation that was given to this  
2 project or to this property was 635 acre feet per year.

3 In earlier years, that allocation was more than  
4 that, so in that period in the late '70s when the average  
5 use was established, it was significantly more than that.

6 Q. So the fact that they have a permit is evidence  
7 of prior usage, prior agricultural tilling and  
8 irrigation; correct?

9 A. (Mr. Miller) Correct.

10 Q. It would be inaccurate to state that farm came  
11 into production in 2018; would you agree?

12 A. (Mr. Miller) That's correct.

13 Q. I believe on the other graphic that you had  
14 provided today, the additional supplement or exhibit that  
15 we had marked as PCE-22 or -- no 21, I'm sorry -- you  
16 were highlighting some impacts on surrounding wells.

17 The question has come up from Committee Members  
18 and from public regarding impacts on residential wells  
19 and I was hoping you could shed some light for the  
20 Committee on what I would say a public misperception or  
21 misunderstanding of how groundwater works, how aquifers  
22 work when you compare a deep agricultural or industrial  
23 well compared to a shallow residential well.

24 Could you explain a little bit about that?

25 A. (Mr. Miller) Yes. I believe the graphic you're



1 referring to is the one on the right panel that we see on  
2 the screens.

3 Q. Yes.

4 CHMN STAFFORD: That would be PCE-21 for  
5 the members who are attending remotely. You should have  
6 received that from Tod.

7 MR. MILLER: So as I mentioned earlier the  
8 graphic shows contours of impact after five years of  
9 pumping at the proposed maximum annual rate of 540 acre  
10 feet per year.

11 And as I described earlier, the contours  
12 that we're showing on the map are three feet of drawdown,  
13 four feet of drawdown, and five feet of drawdown. And  
14 the standard is 10, but because the 10-foot contour is so  
15 small we can't even represent it on this graphic.

16 And so the impact contours show that we  
17 have less, much less than the 10-foot standard which is  
18 required -- the required maximum impact you can have on  
19 neighboring wells.

20 And when we do this calculation, we are  
21 making the assumption that the aquifer -- the impacts  
22 transmit through all layers of the aquifer equally. But  
23 we do know that when you have a deeper, say, irrigation  
24 well or industrial well that pumps from deeper portions  
25 of the aquifer, because water in aquifers tends to

1 transmit horizontally much more effectively than it  
2 transmits vertically, we expect that when you pump it  
3 deeper that deeper layers of the aquifer, the impact to  
4 the shallower aquifer layers would actually be less than  
5 what's calculated here.

6 BY MR. MOYES:

7 Q. So in layman's terms, if you were looking at a  
8 glass of water it would be inaccurate to say that what  
9 actually goes on in the ground would be equivalent to  
10 sticking the straw in the bottom of a glass and therefore  
11 having a shorter straw at the top of the glass lose its  
12 liquid. Is that accurate to say?

13 A. (Mr. Miller) What I would say is the only  
14 problem with that analogy is the way that aquifers are  
15 structured, they're horizontal layers of different  
16 materials. And those horizontal layers tend to have fine  
17 grained units that inhibit the flow of water vertically.

18 So when you suck from that straw that's deeper  
19 in the deeper layers, that effect of that drawdown on the  
20 aquifer is not going to transmit up to the shallower  
21 layers effectively.

22 Q. Thank you. That's what I was trying to get at.

23 MEMBER GOLD: Mr. Chairman.

24 CHMN STAFFORD: Yes, Member Gold.

25 MEMBER GOLD: Based on what you're saying,

1 Mr. Miller, are there cap rocks within the aquifer that  
2 would stop the water from going up and down? Or are you  
3 just saying it's slower to go up and down than it is to  
4 go left and right, because the flow is from higher to  
5 lower?

6 MR. MILLER: It's slower, it's the latter  
7 of what you just said. It is slower to move in the  
8 vertical direction. It transmits, water transmits much  
9 more easily in a horizontal direction.

10 MEMBER GOLD: So basically if you draw too  
11 much water out of the deeper parts of the aquifer, you  
12 will affect the shallower parts of the aquifer. It would  
13 just take a longer time but eventually it will happen.  
14 But what you're saying is you don't take enough water out  
15 of the aquifer for that to happen.

16 MR. MILLER: That's correct. These  
17 calculations assume that it transmits horizontally and  
18 vertically equally. It doesn't account for that slower  
19 impact.

20 MEMBER GOLD: Okay. So basically you will  
21 not affect the local wells.

22 MR. MILLER: The impact is much less than  
23 the standard.

24 MEMBER GOLD: Let me put it in layman's  
25 terms. Will you affect the local wells?

1 MR. MILLER: There -- there will always be  
2 some level of impact. When you pump an aquifer, there is  
3 some level of impact.

4 MEMBER GOLD: Okay. Some level of impact  
5 can be inches, some level of impact can be 100, 200, 300  
6 feet. What level of impact do you anticipate?

7 MR. MILLER: Based on the analysis, much  
8 less than what you can see on the map that we have in  
9 front of you. The impact of five years using this  
10 conservative analysis at the nearest exempt well, which  
11 is shown on the graphic to the northeast of the  
12 production well, it's labeled 55-569124, you can see that  
13 that particular well resides between the three-foot  
14 impact contour and the four-foot impact contour.

15 So you could estimate that the calculated  
16 impact at that location is roughly three and a half feet.

17 MEMBER GOLD: Okay. So you're giving a  
18 real number now. This I can visualize.

19 So how deep are local wells? How deep are  
20 you pumping from?

21 MR. MILLER: The local wells vary in depth  
22 quite a bit. The -- some of the local exempt wells are  
23 in the neighborhood of 500 feet deep. The well that --  
24 the subject well that we're talking about here on the  
25 property that's labeled 55-626493, that particular well

1 is reported to be 1100 feet deep. Actually to be more  
2 precise I'm rounding to 1100. I believe it was 1058.  
3 Let me double-check.

4 MEMBER GOLD: You don't have to be exact.  
5 1100 feet is close enough. So the local wells are 500  
6 feet, you're drawing from 1100 feet and you expect that  
7 in five years the most you're going to pull out of the  
8 well that you're going to be responsible for is three  
9 feet.

10 MR. MILLER: Correct.

11 MEMBER GOLD: Where does the aquifer start?  
12 If they have to go down 500 feet to get water, is the  
13 aquifer at 500 feet? Is that the cap rock? Or is it at  
14 200 feet?

15 MR. MILLER: When you say cap rock --

16 MEMBER GOLD: Whatever it is that's at the  
17 top of the aquifer.

18 MR. MILLER: The top of the aquifer is  
19 basically the groundwater surface. So basically the  
20 aquifer is comprised of alluvial material, sands and  
21 gravels, glaze and silts, and those fill a basin. And  
22 the bottom of the basin is basically crystalline bedrock,  
23 like granites or other hard rock. That's the bottom of  
24 aquifer.

25 The top of the aquifer is basically that

1 depth below, basically below land surface until you hit  
2 water. So if you think of a bowl of cereal, if you pour  
3 milk only halfway up through the cereal, that level of  
4 the milk, that's the top of the aquifer.

5 MEMBER GOLD: Oh, okay. So basically what  
6 you're saying is groundwater seeps into the aquifer.

7 MR. MILLER: Correct, yes.

8 MEMBER GOLD: And where does the majority  
9 of the water come from? Since we are -- we're east of  
10 the Continental Divide or west? Where are we?

11 MR. MILLER: We're west.

12 MEMBER GOLD: We're west of the Continental  
13 Divide.

14 MR. MILLER: Yes.

15 MEMBER GOLD: And it's coming from the  
16 Rocky Mountains and going down all the way to the Pacific  
17 Ocean, somehow. And rainwater is adding to it. And  
18 anything you dump on the ground is adding to it.

19 And you can go down 200 feet and still get  
20 sort of brackish water, I'm guessing, or do you have to  
21 go town 500 feet the point where you can pump it out?

22 MR. MILLER: In this area the depth of  
23 water, we'll say for purposes of this, and I can find  
24 more precise numbers in the application materials. But  
25 we'll say four to 500 feet is the depth that you'd

1 have -- of alluvial material that you'd have to get to  
2 the top of the aquifer, the groundwater surface. And to  
3 answer your question --

4 MEMBER GOLD: You just said something  
5 different. You said top of the aquifer. What is top of  
6 the aquifer?

7 MR. MILLER: What I'm saying, the top of  
8 the aquifer is the top of the groundwater surface. So  
9 there's approximately 400 to 500 feet of alluvial  
10 material that's not saturated with water, it's above the  
11 aquifer.

12 MEMBER GOLD: Okay. So the wells that are  
13 500 feet, that's the average farmer -- house well or farm  
14 well or something?

15 MR. MILLER: Some are deeper, but that's a  
16 good example.

17 MEMBER GOLD: All right. And you're  
18 drawing from 1100 feet, so let's assume they have their  
19 well going down 500 feet. Water -- I'm using the word  
20 water table for the top of the aquifer where the water is  
21 where it's saturated. They still have plenty of water  
22 even if they lose three feet.

23 MR. MILLER: Correct. Depending on the  
24 depth of their well and how far it penetrates below that  
25 water table, then that three feet would be a minor --

1 could be a minor fraction of --

2 MEMBER GOLD: So the question I'm asking is  
3 how deep is the water table top?

4 MR. MILLER: That's the 400 to 500 feet.  
5 I'm going to find a more precise number for you because  
6 we have that in our application materials.

7 MEMBER GOLD: Okay. Now, the question I  
8 asked before we had a break, the other photo that we had  
9 up just before this one, the one that's on page --

10 CHMN STAFFORD: R35.

11 MEMBER GOLD: R35, thank you. Go back and  
12 make that larger so I can see it. The well that's on  
13 your property, 487 ac-foot per year on Midway Road.  
14 After you've been running your plant for five years, will  
15 that green circle get larger or smaller?

16 MR. MILLER: The project demand is 540 acre  
17 feet per year. And so that number is larger than the 487  
18 as shown on the map. But it would still fall within the  
19 300 to 600-acre foot per year range for that size of  
20 circle.

21 MEMBER GOLD: So in short you're going to  
22 be drawing more water than has been drawn before, but not  
23 enough significantly to affect anybody's well.

24 MR. MILLER: That is compared, yes,  
25 compared to that number, 540 would be more than that



1 horizontal average.

2 MEMBER GOLD: Okay. That's what I asked.  
3 Just something visual that we can, you know, we have  
4 people who live in the area and we say it's 487, it's  
5 going to go to 500 and something.

6 But it's not going to change the water in  
7 your well at least for the next five years. And who  
8 knows what's going to happen after five years. But it's  
9 going to be a little larger but nowhere near as large as  
10 the big ones that are 1329, that the other farms are  
11 using in the area. So they're drawing much more water  
12 out of that aquifer than you are.

13 Relatively speaking your draw is  
14 insignificant compared to what everybody is drawing, and  
15 you're providing electricity that's needed, so when we  
16 have heat waves people don't die of heat in their houses  
17 because the air conditioners don't work. Am I correct in  
18 my assumption?

19 MR. MILLER: That is correct. We did an  
20 analysis of basically those numbers that are represented  
21 by the green circles on the map. We looked for all of  
22 the wells within three miles of the project. And there's  
23 an increasing trend of pumping over time, and the current  
24 estimates of pumping within three miles are roughly  
25 20,000 acre feet per year.

1 MEMBER GOLD: Okay. Now, with rainfall and  
2 stuff they're dumping back in, do we anticipate that  
3 aquifer, the water table -- now I learned the proper  
4 terminology from you, thank you, Mr. Miller -- that water  
5 table is going to be receding approximately three feet  
6 over every five years or six feet over every 10 years?

7 MR. MILLER: Well, we also did an analysis  
8 in our application materials, you'll see graphs, they're  
9 hydrographs that show measured groundwater levels at  
10 specific wells over time. And that the average decline  
11 rate of that's occurring currently due to the  
12 horizontal -- due to the mostly agricultural pumping in  
13 the area, there's an average decline of the three wells  
14 we showed on the graphic of I think it's 1.91 feet per  
15 year of decline.

16 MEMBER GOLD: So almost just about two feet  
17 per year.

18 MR. MILLER: Yes, but that's --

19 MEMBER GOLD: And that's for everybody  
20 drawing water out of it and yours is an insignificant  
21 portion of it.

22 MR. MILLER: Ours is not included in that  
23 because obviously the project hasn't been constructed  
24 yet.

25 MEMBER GOLD: Well, judging by the size of

1 circles and aquifer yours is relatively insignificant.

2 MR. MILLER: Correct.

3 MEMBER GOLD: Okay. So people don't have  
4 to worry about losing their wells? And that's the  
5 question I'm asking for the general public. Because when  
6 I took note of their questions, groundwater level of the  
7 people who we hear, 98 percent of them were concerned  
8 about losing water in their wells. So that is not an  
9 issue.

10 MR. MILLER: Correct. We meet all of the  
11 ADWR standards for -- the DWR standard for calculating  
12 and demonstrating that you won't impact neighboring  
13 wells. We're well below the limit of the maximum impact  
14 that you can have on a neighbor.

15 MEMBER GOLD: Thank you. You've answered  
16 what I needed to know. I represent the general public in  
17 case you're asking why I'm hitting these questions,  
18 that's why. And you've answered that question to my  
19 satisfaction, so thank you.

20 MR. MILLER: You're welcome.

21 BY MR. MOYES:

22 Q. Mr. Miller, can you clarify one statement you  
23 made, again you reminded the Committee that the use for  
24 the project would be 540 acre feet per year. But isn't  
25 it correct that is actually a worst-case scenario if the

1 plant were running full -- full production which, in  
2 fact, it will not?

3 A. (Mr. Miller) That is correct. Mr. Thompson in  
4 his testimony yesterday mentioned that the anticipated  
5 water use is much less, and he had less than that. I  
6 don't remember the exact number.

7 Q. Thank you.

8 MEMBER RICHINS: Chairman.

9 CHMN STAFFORD: Yes, Member Richins.

10 MEMBER RICHINS: Can you restate your  
11 requirements for monitoring those wells over the life of  
12 your project? And also if you -- if you find in that  
13 monitoring that you exceed your estimates, what  
14 mitigations are you required to put in place for affected  
15 wells?

16 And the reason I ask this, you know,  
17 pumping -- pumping from one well and irrigating across  
18 190 acres of farmland hits the aquifer over time  
19 differently than when you extract it and then use it and  
20 it doesn't have any natural recharge associated with it.  
21 So I'm not entirely convinced of your modeling, but I'd  
22 like to hear what your requirements for mitigation and  
23 for when your requirements for monitoring first and then  
24 what mitigations will be required of you if you have --  
25 if we find through that monitoring that you would exceed

1 your estimated use.

2 MR. MILLER: The Department of Water  
3 Resources regulates the quantity of groundwater that  
4 would be pumped from -- for the on-site uses. As I  
5 mentioned earlier in my testimony that there are water  
6 rights that are required to pump groundwater, and so the  
7 project will have to demonstrate that it has the right to  
8 pump the quantity of water that it needs.

9 And also, as a nonexempt well within the  
10 active management area, there will be a requirement of  
11 monitoring and reporting the quantity of water that's  
12 pumped every year from that well.

13 MEMBER RICHINS: Do you have any  
14 requirements to monitor wells within those, you know,  
15 some kind of circumference of the project?

16 MR. MILLER: I'm not aware of any  
17 requirements such as that.

18 MEMBER RICHINS: Okay. So any residential  
19 well within X number of distance of you will not be  
20 monitored while you use what you are allowed to use at  
21 the site? So if we have a drawdown of those wells will  
22 we never know that?

23 MR. MILLER: The Department of Water  
24 Resources does monitor groundwater levels at specific  
25 wells through time.

1 As I mentioned, there was the three wells  
2 that we provided hydrographs for. Those water levels are  
3 monitored regularly by the Department of Water Resources.

4 Also, as I mentioned before, there are  
5 impacts to and measured groundwater level drawdown in  
6 those wells and other wells in the area due to the  
7 existing uses out there.

8 And I'm sorry, what was your last question?  
9 I just want to make sure I answer it.

10 MEMBER RICHINS: Well, if you don't have  
11 any requirement for monitoring, I don't know that you  
12 could have requirements for mitigation. That's the  
13 concern here is that if your project exceeds, you know,  
14 you already stated that you're pumping more than the  
15 agriculture use as used historically, in your worst-case  
16 scenario acknowledging that.

17 My concern is if the -- because the way the  
18 water is used on the site is different, that it may have  
19 impacts on surrounding wells including those of  
20 residential, and we need to be able to understand what --  
21 what is happening.

22 And I'm hoping Mr. French might be able to  
23 lend some insight into ADWR on this issue. But, you  
24 know, also that we have to have mitigations in place for  
25 those residential. If you overdraw and those residential

1 wells cease to function as a result of your activity, you  
2 must mitigate it. Period. And I'm just trying to get at  
3 what that looks like.

4 MR. MILLER: What I'll say is the  
5 monitoring of water table declining over time, there is  
6 decline occurring over time and the type of modeling that  
7 we did to demonstrate the well impacts according to the  
8 rules is how you can demonstrate that the well won't have  
9 an unreasonable impact on the neighboring wells.

10 The monitoring would capture the effects,  
11 the collective effects of all pumping in the area, and so  
12 it would be difficult with monitoring to differentiate  
13 the impact of pumping for the project from other  
14 agricultural impacts in the area.

15 MEMBER RICHINS: Just for the record I do  
16 not buy that response. I think you can. So just, sorry.  
17 That doesn't -- anyway, Mr. French, do you have any  
18 insight onto this?

19 MEMBER FRENCH: Well, Member Richins, the  
20 well usage on each property, it's the property owner's  
21 responsibility to report the usage and the water levels  
22 for their own wells. Now, if damages occur to a property  
23 owner and they can prove that it's due to an overdraft of  
24 a neighboring property, they may be able to sue for  
25 damages. Does that answer your question?

1 MEMBER RICHINS: Is that the only recourse?

2 MEMBER FRENCH: That's one of the major  
3 recourses for it. So there are a lot of protections in  
4 this scenario when we're talking about overdraft and the  
5 authorities that are associated with each property.

6 So for this one, for example, currently has  
7 an irrigation grandfathered right allotment of 635 acre  
8 feet for each year.

9 Now, when this facility stands up, they'll  
10 have to retire that irrigation grandfathered right and  
11 transition that to a Type 1 authority, which I'm sure  
12 Mr. Miller is going to get into here pretty soon on that  
13 process, and that volume will change.

14 And it's also in their literature that any  
15 other overages will be transferred to this facility  
16 through long-term storage credits, and I'm very curious  
17 to hear about where those storage credits are going to be  
18 recovered and how you're going to take delivery of them.

19 So I think, Member Richins, that there's  
20 more information coming that might shine a little bit  
21 more light on your questions.

22 MEMBER RICHINS: Perfect. Thank you, sir.

23 MEMBER FRENCH: No problem.

24 CHMN STAFFORD: Mr. Miller, perhaps you  
25 could walk us through Exhibit PCE-21. Tell us exactly



1 what the red circles mean. It looks like a bull's-eye  
2 with some hits in it. And I'm confused, I'm looking at  
3 the center of it. There's the 55-626493. I understand  
4 that is the well, existing well at the property you  
5 intend to use.

6 What is the blue dot to the left of that?  
7 Is that another well on the property that we haven't  
8 talked about?

9 MR. MILLER: There is another well on the  
10 property and that's what that dot represents.

11 CHMN STAFFORD: Is it not active now?

12 MR. MILLER: That well is not active  
13 according to the deed of our record.

14 CHMN STAFFORD: So what do the red circles  
15 mean, and you have aquifer parameters here, scenario 3  
16 with some letters and numbers. Co you tell us what  
17 exactly what -- exactly what that means?

18 MR. MILLER: Sure.

19 CHMN STAFFORD: Maybe Member French knows  
20 what it means, but I'm not entirely -- I don't understand  
21 what we're looking at here exactly.

22 MEMBER FRENCH: Mr. Chairman, I really  
23 don't understand exactly what all those acronyms are on  
24 that section. But I am curious about the pumping rate  
25 that's listed there. It shows on this slide that it's

1 assumed for this analysis at 334 gallons per minute. But  
2 I believe in the documentation for the well on this  
3 property, it's got a pump that's rated at 900 gallons per  
4 minute. So I'm curious how we ended up at this number.

5 MR. MILLER: Sure. I'd be happy to explain  
6 all of that.

7 So first I'll talk about the acronyms and  
8 the numbers on the right side of the graphic. Aquifer  
9 parameters 55-626439, that's just a label here. And  
10 scenario 3 was one of other scenarios that -- of impact  
11 analyses that we did.

12 As we mentioned in our application  
13 materials, we also ran an impact scenario for the  
14 incremental impacts, which was roughly 200 acre feet per  
15 year more than horizontal pumping. So I'm just  
16 explaining that this is just one of several scenarios of  
17 impacts that we calculated.

18 The next line it says "T," and then in  
19 parentheses, "GPD per foot." That T stands for aquifer  
20 transmissivity, and the units on that number are what's  
21 in parentheses, that's gallons per day per foot.

22 This is a standard unit for representing  
23 the transmissivity of the aquifer.

24 CHMN STAFFORD: Wait. Back up.  
25 Transmissivity. What -- what are you saying and what

1 does it mean?

2 MR. MILLER: That's what I was getting to.  
3 Transmissivity is basically a parameter, it's a standard  
4 parameter that hydrologists use in calculations such as  
5 this. It's -- it's the value of that number represents  
6 how easily water transmits through the aquifer.

7 So you can think of it as, you know, if you  
8 had an aquifer that was only comprised of gravel with a  
9 lot of pour spaces and compare that to an aquifer that's  
10 comprised of, say, silt material, the aquifer  
11 transmissivity of the gravel would be significantly  
12 higher than the transmissivity of the silt aquifer.

13 MEMBER GOLD: Transmissivity is like flow  
14 rate, then.

15 MR. MILLER: It's not flow rate. It's a  
16 parameter that tells you how easily does water move  
17 through the aquifer.

18 CHMN STAFFORD: Does that mean -- does that  
19 translate to if I draw over here, does it move down in a  
20 more uniform rate as opposed to being more sensitive  
21 to -- this place will not move down as much, this one  
22 would more depending on the type of soil that you're in?

23 MR. MILLER: Yeah, if you have an aquifer  
24 that has varying materials, then you would expect that  
25 water might transmit through the more porous materials

1 more easily than it would through other materials.

2           So -- so this -- this calculation that  
3 we're doing, this well-impact calculation, we're using  
4 what's called the Theis nonequilibrium equation, and  
5 that's a standard parameter that you use for that  
6 equation.

7           The next line is SY, that stands for  
8 specific yield. This is another parameter that's used in  
9 the calculation. And it is -- it represents how much  
10 water would drain out from a -- basically a unit  
11 one-foot-by-one-foot section of aquifer if you drained  
12 the water out of that saturated alluvium, how much  
13 percentage of that chunk of aquifer would be water that  
14 drains out.

15           And so in this case, we're using 6 percent,  
16 0.06, which would be 6 percent of that volume is water  
17 that would drain out due to gravity.

18           The next line.

19           CHMN STAFFORD: What does that mean  
20 exactly? Is that like subsidence or is this something  
21 else we're talking about?

22           MR. MILLER: No, this is just the volume of  
23 water that's contained in a volume of aquifer. So --

24           CHMN STAFFORD: Okay. So the makeup of  
25 water as opposed to soil?

1 MR. MILLER: Right. Correct.

2 CHMN STAFFORD: Okay.

3 MR. MILLER: And there are different terms  
4 for the storage -- this is one of several storage  
5 properties of an aquifer. This particular one is  
6 specific to if you drain an aquifer by gravity, how much  
7 water would come out the bottom.

8 There still could be some residual water  
9 that stays behind. And that's not included in this  
10 specific yield. This is specifically what would drain  
11 out if you let gravity drain the aquifer.

12 CHMN STAFFORD: Oh, so if it could -- not  
13 pumping, but if it was going to flow downwards if it was  
14 able to because the aquifer's not doing that. This is a  
15 kind of what-if scenario, then?

16 MR. MILLER: Correct. It is used in these  
17 calculations because as we're calculating drawdown on an  
18 unconfined aquifer, a water table aquifer, that that, as  
19 the water table drops when you're pumping, that's how  
20 much water is expected to yield from the portions of  
21 aquifer that you drain.

22 CHMN STAFFORD: Okay.

23 MR. MILLER: The third line, it says B sat  
24 and in parens it has FT, which stands for feet. This is  
25 the saturated thickness of the aquifer that we used in

1 these calculations. And that particular parameter is  
2 used for the unconfined aquifer correction. It's -- it's  
3 basically this number represents how thick is the total  
4 aquifer that we're including in the calculation.

5 CHMN STAFFORD: Okay. So looking at  
6 PCE-21, the B sat is 510. Looking at PCE-22, you're  
7 calculating that the sat -- that's the saturated  
8 thickness of 500 feet at the end of a hundred years. So  
9 you're looking at a drawdown of approximately 10 feet.

10 MR. MILLER: No, that 510 feet is basic --  
11 those are two different numbers.

12 That particular number on that slide we can  
13 get into what that is. But that's how much total aquifer  
14 would be remaining at the end of 100 years of pumping for  
15 the project and all other uses in the basin.

16 This particular number that's used in this  
17 calculation represents how much of the aquifer we're  
18 including in the calculation for drawdown over the next  
19 five years. So those are kind of two different time  
20 frames that we're talking about.

21 CHMN STAFFORD: Okay. So but the B sat,  
22 that's not -- that's not the same thing as the saturated  
23 thickness of the aquifer?

24 MR. MILLER: It is. We're just talking  
25 about -- in that case we're talking about the total depth

1 all the way to the basement rock after a hundred years of  
2 pumping in the basin. And this particular number is  
3 looking specifically at the thickness of aquifer to the  
4 bottom of the well on the project site --

5 CHMN STAFFORD: Because I'm --

6 MR. MILLER: -- in current conditions.

7 CHMN STAFFORD: Okay. I'm looking, I'm  
8 trying to wrap my head around this. So you have, there's  
9 the surface of the land and below that at some point is  
10 the beginning of the water table.

11 MR. MILLER: Correct.

12 CHMN STAFFORD: Then there's a thickness of  
13 the aquifer to the bedrock because at some point there's  
14 no more water going down; correct?

15 MR. MILLER: Correct.

16 CHMN STAFFORD: So the two measurements  
17 we're talking about is going to be the depth from the  
18 surface to the top of the aquifer and then the depth from  
19 the top of the aquifer to the bottom of the aquifer.

20 And so maybe just kind of cut to the chase,  
21 what's the -- let's call the distance from the surface to  
22 the top of the aquifer distance A, and then from the  
23 surface, from the top of the aquifer to the bedrock, the  
24 bottom distance B.

25 What is A now and B now, and what is the

1 projected A and B a hundred years from now, and I guess  
2 it's not -- and it's going to be the same with or without  
3 this project.

4 MR. MILLER: Right. So let's use really  
5 round numbers, but this matches kind of what we're  
6 talking about here.

7 So the depth from land surface to the top  
8 of the aquifer now, or the water table as we've used that  
9 term, is roughly 5500 feet. The bottom of this well is  
10 roughly 1100 feet. Right. So there's about 600 feet of  
11 thickness from the current water table down to the bottom  
12 of this well.

13 CHMN STAFFORD: And you measured that and I  
14 guess the SY, the S-Y, that's the density of the water  
15 makeup in the soil.

16 MR. MILLER: That's the specific yield.  
17 That's the volume of water that's contained within a  
18 volume of aquifer. So that's the percentage of that  
19 volume of aquifer, that's water that would drain out.

20 CHMN STAFFORD: Okay.

21 MR. MILLER: So we got 600 feet of  
22 saturated thickness from the aquifer top to the bottom of  
23 the well. And then on this slide here on the left would  
24 show that the depth of the aquifer in the area is roughly  
25 1350 feet from land surface to the bottom.



1 So from that 1100-foot bottom of the well,  
2 we would add another, what, 250 feet to get to the very  
3 bottom of the aquifer.

4 CHMN STAFFORD: And if you do deeper than  
5 that you're not getting water, then.

6 MR. MILLER: Deeper than than you're going  
7 to be into hard rock, and while there may be some water  
8 within the hard rock, it's effectively not an aquifer.  
9 It's not a source of water.

10 MEMBER GOLD: Mr. Chairman.

11 CHMN STAFFORD: Yes, Member Gold.

12 MEMBER GOLD: So in summary, Mr. Miller,  
13 you're saying after a hundred years we're roughly going  
14 to halve the size of the actual water remaining in the  
15 aquifer. If you go from it's 500 feet now and you're  
16 going down to, what did you say, you're going down to  
17 850 feet?

18 MR. MILLER: 850.

19 MEMBER GOLD: So five, six, seven, 850 is  
20 350 feet. That will leave from an aquifer that is -- the  
21 bottom is 1350 feet. After a hundred years, you're going  
22 to 850 feet. That's roughly half the aquifer will be  
23 used up in a hundred years by everybody using it at the  
24 rate they're using now, assuming we don't pump somehow  
25 water back into it? If my math is, you know, it's close.

1 MR. MILLER: I believe your math is pretty  
2 close, yeah.

3 MEMBER GOLD: Okay. Now, the question I  
4 have. Water flows, even in an aquifer it flows. And the  
5 direction it's flowing is south?

6 MR. MILLER: In this area, the water is  
7 actually moving west.

8 MEMBER GOLD: So it's moving west. So that  
9 means that whoever's drawing the most water out of their  
10 well that they're pumping it directly out of their well,  
11 there's going to be a cone behind that well at that depth  
12 that's going to have less water in it. And that is  
13 really what's going to be affecting people's wells is  
14 where that cone is.

15 And judging by where your well is, I don't  
16 see any -- any structures that are going to be affected  
17 by that cone. Do you?

18 MR. MILLER: No. There is a regional cone  
19 of depression due to all of the pumping in the basin.  
20 And that's primarily what drives the groundwater flow  
21 direction to the west.

22 MEMBER GOLD: Okay. So you shouldn't  
23 affect any of the local wells with your project is all  
24 I'm seeing, and that's the reason we're here today, to  
25 allay that fear to the people who are concerned about

1 losing water in their wells, and that was a big concern  
2 of the people.

3 Just out of curiosity's sake this has  
4 nothing to do with this project. But since you're an  
5 expert on this, where does the water from the Santa  
6 Cruz -- this is leading into the Santa Cruz River  
7 somehow. Where does the Santa Cruz River actually  
8 terminate? Do you know?

9 MR. MILLER: Well, I do know that the Santa  
10 Cruz River as it flows in from the south, from the Tucson  
11 active management area into this area, a lot of the  
12 natural flows have been diverted and flow through manmade  
13 channels in this area.

14 And there -- but there is some portions of  
15 the active Santa Cruz River that when there's significant  
16 rainfall runoff event that still flows.

17 But a good portion of the water's kind of  
18 routed around the west side of the Pinal active  
19 management area and up towards the Gila River to the  
20 north.

21 MEMBER GOLD: Okay. Because the reason I'm  
22 questioning is I saw some other photos of the city of  
23 Tucson and they had boats on the river. And that was  
24 200 years ago. So in a period of 200 years we seem to  
25 have lost some rivers. But the underground rivers are

1 still flowing, the aquifers.

2 MR. MILLER: I wouldn't refer to them as  
3 underground rivers, but yes, there is definitely  
4 groundwater available as we've been relying on for a  
5 source of water and continue to.

6 MEMBER GOLD: And where does this  
7 groundwater ultimately start coming from?

8 MR. MILLER: So aquifers are -- the source  
9 of water for aquifers in these basin arranged basins like  
10 this one, basically it's rainfall, primarily within  
11 higher elevations that collects and runs off.

12 So that water moves into these basins,  
13 either at the mountain front through a lot of times small  
14 channels that come off of the mountains surrounding the  
15 basin. Rainfall would fall on the mountains and then  
16 make its way into the aquifer along the mountain fronts.

17 But there's also rainfall that occurs, you  
18 know, you mentioned the Santa Cruz River, so any of the  
19 mountains that contribute to runoff that goes into the  
20 Santa Cruz River, that water collects in the river and  
21 makes its way into the basin. And it can infiltrate  
22 through the bottom of the stream channel into the  
23 aquifer.

24 MEMBER GOLD: So an exceptional raining  
25 year actually can add water to the aquifer?

1 MR. MILLER: Correct.

2 MEMBER GOLD: Okay. Just -- I was just  
3 curious. Thank you.

4 MR. MILLER: You're welcome.

5 MEMBER KRYDER: Mr. Chairman.

6 CHMN STAFFORD: One second, Member Little  
7 had a question and then I'll move to you, Member Kryder.

8 MEMBER KRYDER: No problem.

9 MEMBER LITTLE: Thank you. I want to ask  
10 this question before we move on. On this PCE-21 here  
11 that's shown on the right screen. But the numbers that  
12 you just explained to us, the T and the SY, and all the  
13 rest of them, those are assumptions that go into the  
14 calculation; is that correct?

15 MR. MILLER: They're estimates of those  
16 aquifer parameters based on published information.

17 MEMBER LITTLE: Okay. That was my  
18 question, where it came from and I appreciate that.  
19 Thank you.

20 CHMN STAFFORD: And you were going to tell  
21 us what the red circles meant, too.

22 MR. MILLER: Yeah. If you don't mind I'll  
23 finish because the other Member had a question about the  
24 pumping rate that we used here.

25 CHMN STAFFORD: Okay.

1 MR. MILLER: On the right side it says  
2 "Pumping rate," and in parentheses "GPM, 334.55."

3 So this standard for that this impact  
4 calculation is how much water is used annually. And so  
5 that number represents the annual average pumping for the  
6 project of 540 acre feet per year, just converted in  
7 units to gallon per minute.

8 So just to explain why that doesn't -- that  
9 doesn't represent the instantaneous maximum flow rate at  
10 any time you would turn on the pump in this well. If  
11 that well is currently pumping at 900 gallons per minute,  
12 it doesn't pump all year long at 900 gallons per minute  
13 so what we put into these calculations is the annual use.

14 CHMN STAFFORD: Okay. Member Kryder, you  
15 had a question.

16 MEMBER KRYDER: Thank you very much.

17 Just kind of looking at this, again, from  
18 an ag point of view, I -- do I have these correct?  
19 Please correct me if I got it wrong -- but from your  
20 information here, it said that the project will be using  
21 540 acre feet per year at full function. Is that --  
22 that's correct?

23 MR. MILLER: Yes.

24 MEMBER KRYDER: And a moment ago, Member  
25 Richins or someone asked the question, and I think you

1 answered that there was an agricultural grandfathered  
2 rate of 635 acre feet per year allotted to the 350 acres  
3 that you're building your project on. Is that right?

4 MR. MILLER: That's correct.

5 MEMBER KRYDER: So I know that when you --  
6 well, again, correct me if I'm wrong -- but my  
7 understanding that as this property moves away from an ag  
8 utilization to an electric, for lack of a better term,  
9 utilization, an industrial utilization, you have to give  
10 up the 635 acre feet grandfathered to you and get  
11 recalibrated somehow under whatever an industrial rating  
12 is; is that correct?

13 MR. MILLER: There is a conversion of  
14 what's currently an irrigation grandfathered right with  
15 the current allocation of 635 acre feet per year. That  
16 right can be retired and converted to a Type 1 water  
17 right. And the annual limitation on the Type 1 water  
18 right is the maximum annual limitation would be 480 acre  
19 feet.

20 MEMBER KRYDER: 488?

21 MR. MILLER: 480, 480.

22 MEMBER KRYDER: 480. Okay. So is that a  
23 required retirement, or is that something -- tell me how  
24 that happens or why.

25 MR. MILLER: It's not required, but as I

1 mentioned before, there is a requirement to pump  
2 groundwater going forward for the project that the owner  
3 has a water right to pump the aquifer.

4 And so that would be one of the water  
5 rights that that would be used to pump water going  
6 forward would be the conversion of that irrigation right  
7 to a Type 1 water right.

8 MEMBER KRYDER: Okay. So if -- and I'm not  
9 making any suppositions about this -- but if you all  
10 folded your tent and went away, and that came back and  
11 became an alfalfa field the next 10 years, the owner of  
12 that property would have a grandfathered 635 acre feet  
13 right to either groundwater or some kind of water for  
14 irrigation?

15 MR. MILLER: The current allocation is 635  
16 acre feet per year and that may diminish somewhat over  
17 time. It's been significantly more than that in the  
18 past. But, yes, you're correct. The irrigation right  
19 would continue into the future.

20 MEMBER KRYDER: So then in that mythical  
21 scenario that you left and the project never took hold  
22 and it went back and grew alfalfa and cotton and corn and  
23 beans, it could impact the neighbors legally under the  
24 rules there, equal to or greater than your project would  
25 do it? Is that -- did I get that correct?



1 MR. MILLER: That's correct. If the farm  
2 would continue to use water at the same average rate that  
3 it's used water as reported for 2018 through 2023, then  
4 that average total water use was 622 acre feet per year.  
5 So the project is proposing to use much less than that.

6 MEMBER KRYDER: 540 it said in your  
7 project.

8 MR. MILLER: Correct.

9 MEMBER KRYDER: Okay. So the point that  
10 seemed to me as I looked and read through your document  
11 was that the project is planning to use 540. The farmer,  
12 if the farm stayed active as a farm, it could use up to  
13 635 modified at maybe that because of this, that or the  
14 third. And you all are planning to use a good deal less  
15 than that. I mean, a hundred acre feet per year less  
16 than the farm action.

17 So I don't know, you're generating --  
18 keeping the air conditioners on as Member Gold said a  
19 minute ago. And it seemed to me golly, heck of a deal.  
20 Plus I heard yesterday in a completely sidebar question  
21 about real estate taxes, the farmer would pay \$10,000  
22 back of the envelope a year on that property, and if it's  
23 my well and I get all cranky about that I know I probably  
24 would think different than if I thought a thousand feet  
25 up and looked at the impact on Pima County -- or Pinal

1 County, but Pinal County is going to get 6.6 million out  
2 of your pocket every year back of the envelope. In real  
3 estate taxes. So 10,000 traded for 6.6 million. I'd do  
4 that today.

5 Do I have any of those calculations  
6 incorrect?

7 MR. MILLER: I certainly can't speak to the  
8 real estate taxes but I understand your train of thought.

9 MEMBER KRYDER: Thank you very much.

10 CHMN STAFFORD: I thought the 6 million was  
11 over the life like 20, 30 years or something. And the  
12 10,000 a year would end up being a hundred thousand  
13 dollars for ten years. I thought the 6 million was for a  
14 ten-year period.

15 MR. MORGAN: It was annually 6.6 a year  
16 averaged over the length of 25 years.

17 CHMN STAFFORD: Right. But it will be  
18 higher in the earlier years, then it will drop down in  
19 the later years.

20 MR. MORGAN: Yes.

21 CHMN STAFFORD: It's the average.

22 MR. MORGAN: Correct.

23 MEMBER KRYDER: But it averaged to 6.6 mill  
24 per year.

25 MR. MORGAN: That's correct.

1 MEMBER KRYDER: Which is a big -- which is  
2 a big number.

3 CHMN STAFFORD: Lot bigger than 10,000.

4 MEMBER MERCER: Mr. Chairman.

5 CHMN STAFFORD: Yes, Member Mercer.

6 MEMBER MERCER: I appreciate all the  
7 questions about the acre water and all these things that  
8 I don't understand. So I would like to understand.

9 My question is, and I don't know who can  
10 answer it. My understanding is that the total area, the  
11 land is 350 acres or something like that, but the plant  
12 is only going to use about half of that? Or 170 acres?  
13 I heard something like that.

14 So the water usage at 350 acres growing  
15 alfalfa or cotton or whatever it was is going to be less  
16 with the plant using 150 acres or 170 acres. Is that  
17 correct? Am I understanding that right?

18 MR. MILLER: Well, one detail to add to  
19 that is that while the whole project is 350 acres, not  
20 all of it is actively farmed. There's 189 irrigation  
21 acres. So there's 189 acres of that 350 is the area  
22 that's allowed to be farmed, basically. That's where  
23 that 635 acre foot per year allotment can be used, it's  
24 within 189 acres of the property.

25 MEMBER MERCER: Okay. Thank you.

1 MEMBER GOLD: Mr. Chairman.

2 CHMN STAFFORD: Yes, Member Gold.

3 MEMBER GOLD: Okay. This has absolutely  
4 nothing to do with questions I had earlier because you've  
5 answered them.

6 But this is now the third time that people  
7 have asked what are the concentric circles on your map?

8 MR. MILLER: Thank you for asking. Because  
9 I was hoping we'd get back to that. And we'll do that  
10 now.

11 So we talked about the parameters on the  
12 right side are the numbers -- the parameters that we put  
13 into the Theis nonequilibrium equation to calculate  
14 aquifer drawdown.

15 The red circles, the concentric circles on  
16 the map are the results of that calculation. And  
17 essentially the contours, so the contour on the outside  
18 is three foot, that represents three feet of aquifer  
19 drawdown at the end of five years of pumping for 540 acre  
20 feet aquifer year.

21 And so the calculation basically is telling  
22 us that at that distance away from the well, the  
23 estimated drawdown in the aquifer water level, the water  
24 table at that location is estimated to draw down three  
25 feet at the end of five years.

1 MEMBER GOLD: And what about the next  
2 circle and the innermost circle?

3 MR. MILLER: So the next circle in is the  
4 four-foot drawdown contours, so that --

5 MEMBER GOLD: Ah.

6 MR. MILLER: -- and the inner circle is the  
7 five-foot drawdown contour.

8 MEMBER GOLD: Now it makes sense. You  
9 should have put it in your key. Okay. So, well, that's  
10 again the flow. It's not going to be a circle like that.  
11 It's going to be sort of like an ellipse because of the  
12 flow and the flow is going from south to north so the  
13 ellipse would stretch.

14 CHMN STAFFORD: I thought it was to the  
15 west.

16 MEMBER GOLD: East to west. The ellipse  
17 would flow from the left to the right, the ellipse would  
18 stretch out.

19 MR. MILLER: Well, actually if we're  
20 specifically calculating the drawdown impact due to  
21 pumping a well, the drawdown contours, if you have a  
22 uniform aquifer you would expect the drawdown contours to  
23 be circular.

24 MEMBER GOLD: Even though the flow is going  
25 one direction to the other?

1 MR. MILLER: That's correct.

2 MEMBER GOLD: All right. Thank you. Okay,  
3 now we know what it is.

4 CHMN STAFFORD: So the modeling, these  
5 concentric circles the modeling shows three feet of  
6 drawdown over five years on the outermost circle, and  
7 then four and five.

8 Now, that that's based on not just -- is  
9 that based on just the draw from this particular well or  
10 does it account for the water consumption of all the  
11 other wells that are on the other slide?

12 MR. MILLER: These concentric circles  
13 represent drawdown in response to only pumping the  
14 500 feet acre feet per year of -- from that well.

15 CHMN STAFFORD: All right. And that  
16 projected use I think you said was 395 acre feet per  
17 year?

18 MR. MILLER: This projected use in this  
19 calculation is 540 acre feet per year.

20 CHMN STAFFORD: Right. That's the  
21 worst-case scenario. You're saying previously -- what  
22 previous witnesses talked about about how the plant would  
23 operate and the amount of water it would actually use.

24 It would be more along the lines of 395  
25 acre feet. If you look -- I'm just referring back to

1 slide R35, because they have the current use, the  
2 projected use, the max modified use and max net increase.  
3 That's --

4 MEMBER GOLD: Mr. Chairman.

5 CHMN STAFFORD: One second, I think they're  
6 going to give me the answer here.

7 MR. MILLER: I was just conferring with  
8 Mark who gave that testimony yesterday. The actual water  
9 usage is expected to be 380 acre feet per year.

10 CHMN STAFFORD: Okay. All right, and this  
11 three-foot, four-foot, five-foot drawdown is based on the  
12 540-acre-foot drawdown?

13 MR. MILLER: That's correct.

14 CHMN STAFFORD: Okay. All right. So this  
15 is, again, a conservative estimate because you're  
16 modeling on circumstances that are more extreme or severe  
17 than what you actually intend to do? But the limits of  
18 with this max pumping max usage, that's set by DWR, as  
19 of -- how is that determined?

20 MR. MILLER: The 540?

21 CHMN STAFFORD: Yes.

22 MR. MILLER: That's the maximum that is  
23 anticipated. So the actual -- the actual use and to  
24 correct the number, I have that graphic in front of me,  
25 it's 395 acre feet is the anticipated amount.

1 The 540 is a conservative overestimate.

2 That's the maximum, that would --

3 CHMN STAFFORD: That's if they were  
4 operating all the units all the time, in excess of the  
5 air permit or at the maximum of the air permit.

6 MR. MILLER: Yeah, I don't know the details  
7 of how that demand is calculated.

8 CHMN STAFFORD: Okay.

9 MEMBER FONTES: Mr. Chairman, I have a  
10 related question if I can.

11 CHMN STAFFORD: One second.

12 And then so my other question was that you  
13 had, when you retire the grandfathered irrigation rights,  
14 there's a formula to be classified to an industrial 1, or  
15 there's a different classification for the well and what  
16 is -- what is that limit?

17 I think you talked about a limit. I don't  
18 recall a specific number. It was a conversion from going  
19 from the grandfathered irrigation rights to an industrial  
20 use. I assume that's set on some kind of formula to  
21 transfer those rights from one purpose to another.

22 MR. MILLER: Yeah, the conversion you're  
23 talking about is retiring of an irrigation grandfathered  
24 right to a Type 1 water right. That conversion would  
25 result in a maximum annual use associated with that



1 Type 1 right of 480 acre feet per year.

2 CHMN STAFFORD: Okay. So that's less than  
3 the max modified use, so you wouldn't be able to get to  
4 that based on the Class I water right? You wouldn't be  
5 able to get to this maximum output that you modeled for  
6 this scenario, then; correct?

7 MR. MOYES: Not with that right alone.

8 CHMN STAFFORD: Right. You'd have to get  
9 surface water to come in to augment that or something,  
10 wouldn't you?

11 MR. MILLER: It wouldn't necessarily have  
12 to be surface water. There are other water rights that  
13 could be used.

14 CHMN STAFFORD: Okay. So you have to  
15 acquire somebody else's water rights.

16 MR. MILLER: Yeah.

17 CHMN STAFFORD: Okay. Now I understand.  
18 Thank you.

19 Member Fontes, you had a question?

20 MEMBER FONTES: Yes, Mr. Chairman.

21 Does the modeling include a fuel change for  
22 hydrogen? Hydrogen burns higher temperature, uses  
23 greater water even in the air emissions LM6000 units, and  
24 this is already being looked at 25 year -- the applicant  
25 has already stated that they're considering alternative

1 fuel use. So Mr. Miller, does your analysis complete and  
2 include that?

3 MR. MILLER: As I mentioned, I don't know  
4 and didn't do the demand calculations for specific uses  
5 on site. So I can't provide that testimony to you. But  
6 we could follow up with that.

7 MEMBER FONTES: I'd like to know the water  
8 impacts on that if you're going to change fuel at any  
9 point. If not, we'll make it a condition precedent that  
10 if you do fuel change that you'll have to come before  
11 this Committee for an approval or something like that.  
12 But happy to work with the applicant on that.

13 MEMBER FRENCH: Mr. Chairman.

14 CHMN STAFFORD: Yes. Member French.

15 MEMBER FRENCH: Mr. Miller, I mentioned  
16 earlier the long-term storage credits and the recovery or  
17 how you're going to take delivery of those. In your  
18 documentation it talks about how you could acquire Type 2  
19 water right or take delivery or withdraw long-term  
20 storage credits.

21 Can you go over what those are so the  
22 Committee Members can understand the regulatory framework  
23 around those and how you would be able to acquire those?

24 MR. MILLER: Sure. So we have already  
25 talked about irrigation grandfathered rights and we

1 talked about Type 1 water rights. Those type of water  
2 rights are specifically tied to geography of land.

3 So if we converted the irrigation right  
4 there would be a Type 1 water right associated with this  
5 property.

6 There are also what's called Type 2 water  
7 rights. These are also nonirrigation water rights. They  
8 were created roughly when the Groundwater Management Act  
9 was passed, and there were folks that were using  
10 groundwater for other uses like other industrial uses or  
11 golf courses and whatnot.

12 Those grandfathered water rights are not  
13 tied to any specific parcel of land. And so there are a  
14 pool of those Type 2 water rights that are available  
15 within the Pinal active management area, and there's a  
16 market for them that, you know, the property owner for  
17 Bella could acquire, either lease a Type 2 water right or  
18 purchase a Type 2 water right, and use that as a  
19 withdrawal authority for pumping from a well within the  
20 project.

21 And then you also mentioned long-term  
22 storage credits. Long-term storage credits are credits  
23 to pump water, that they're generated when somebody  
24 stores water in the aquifer.

25 So, for example, there are two types of

1 storage facilities. There are underground storage  
2 facilities and there are groundwater savings facilities.

3           Underground storage facilities are like a  
4 physically constructed recharge project, where somebody  
5 takes a source of water, we'll use Central Arizona  
6 Project water as an example because it's the type of  
7 water that would most likely be used for long-term  
8 storage credits in the case that we're talking about  
9 today.

10           So if somebody has a right to Central  
11 Arizona Project water and they bring that water into the  
12 basin and they physically use either an infiltration  
13 basin, they allow that water to recharge into the aquifer  
14 by filling a basin full of water and letting it  
15 infiltrate into the land surface.

16           Or they could inject that water into an  
17 aquifer storage and recovery well, basically they're  
18 injecting that water directly into the aquifer through a  
19 well. Those are examples of an underground storage  
20 facility.

21           When you store -- when you take that  
22 external water source and store it in the aquifer, you  
23 acquire long-term storage credits. That gives you --  
24 that credit gives you the ability to later pump the  
25 aquifer to recover those long-term storage credits from

1 the aquifer.

2 CHMN STAFFORD: And that would be in  
3 addition to any right you had to pump like a Type 1  
4 because you're authorized to pump X amount of acre feet  
5 per year. If you had that credit you could take, you  
6 could pump from that same spot an additional amount based  
7 on what you had injected someplace else.

8 MR. MILLER: Yes. The long-term storage  
9 credits are acquired through these different facilities,  
10 and they are credits that can be withdrawn anywhere  
11 within the active management area. And the -- I  
12 mentioned underground storage facility.

13 Groundwater savings facilities are another  
14 way to store those credits, and this is over the course,  
15 since Central Arizona Project water became available  
16 through the CAP canal, those -- their groundwater savings  
17 facilities were permitted within the Pinal active  
18 management area, one of them includes the  
19 Maricopa-Stanfield Irrigation District where this project  
20 is located, and the irrigation district essentially took  
21 CAP water and they would -- they otherwise would have  
22 pumped groundwater, so there would be less groundwater in  
23 the aquifer had they not taken the CAP water.

24 And by taking that water as part of a  
25 groundwater savings facility, that also generates

1 long-term storage credits, because there's more water in  
2 the aquifer available because they didn't  
3 pump groundwater.

4 CHMN STAFFORD: So they physically take  
5 delivery of the surface water and use it for irrigation  
6 as opposed to pumping the water used for irrigation.

7 MR. MILLER: Correct.

8 CHMN STAFFORD: And they track that, so all  
9 the stuff that you -- and you have to purchase that  
10 surface water. You don't have to purchase the water that  
11 you pump out of the ground; right?

12 MR. MILLER: Well, in the case of the  
13 groundwater savings facility use of that water, my  
14 understanding is that the entity that owns the rights to  
15 the Central Arizona Project water, they -- they're  
16 providing that water to the irrigation district, and so  
17 it's -- and they by giving that water to the irrigation  
18 district and they end up with the long-term storage  
19 credit.

20 CHMN STAFFORD: And they have the ability  
21 to pump the groundwater from that -- in that district in  
22 that active management area.

23 MR. MILLER: Correct, or they can also sell  
24 that long-term storage credit to another entity who can  
25 recover that particular volume of water.

1 CHMN STAFFORD: Okay. So it's like a trade  
2 almost, I trade you the surface water, in exchange I get  
3 the right to pump the equivalent amount of groundwater in  
4 addition to what you were already allowed to do.

5 MR. MILLER: It was an effective way to  
6 benefit from having CAP water when it was available. We  
7 had excess CAP water available. It was a way to benefit  
8 Arizona by not pumping as much groundwater every year and  
9 that's reflected in -- if you look at the historical  
10 record of groundwater levels within the aquifers, once  
11 the CAP water started to be used on these groundwater  
12 savings facilities, the aquifer recovered significantly.

13 CHMN STAFFORD: That was back in the good  
14 old days before they cut 500,000 acre feet from Arizona's  
15 allocation; right?

16 MR. MILLER: Correct.

17 MEMBER FRENCH: So Mr. Miller, how does the  
18 project intend to take delivery of any long-term storage  
19 credits that are purchased?

20 MR. MILLER: What the -- what I understand,  
21 the way that the project could benefit from long-term  
22 storage credits is they would permit their well or wells  
23 on site to -- as a recovery well which would allow  
24 them -- this is a separate permitting process from  
25 standard well permitting, but it's another application

1 that goes through the Department of Water Resources that  
2 would approve the -- that well as a source of water  
3 for -- as a withdrawal authority they could pump  
4 long-term storage credits.

5 MEMBER FRENCH: So the facility you could  
6 use your well to not only pump groundwater pursuant to  
7 the authority, but you could also recover stored water  
8 through the same well.

9 MR. MILLER: Correct.

10 MEMBER FRENCH: But does that change the  
11 permitted well volume that's established with that well  
12 pursuant to the well impact analysis that's done?

13 MR. MILLER: The well impact analysis  
14 that's done for permitting the pumping of groundwater,  
15 there's a very -- there's a similar rule that applies to  
16 the impacts for recovering and -- for recovering  
17 long-term storage credits.

18 And so when a well is permitted to both  
19 pump groundwater and to recover long-term storage  
20 credits, the permits are written in such a way that the  
21 maximum pumping of either type doesn't exceed the annual  
22 limit that's set based on the well impact calculations.

23 MEMBER FRENCH: Thank you.

24 CHMN STAFFORD: Member Fontes, did you have  
25 another question?



1 MEMBER FONTES: I did not. Just curious  
2 for -- to find out how we can address the potential use  
3 of hydrogen on that, because I think it's going to change  
4 the water consumption rates.

5 CHMN STAFFORD: I guess the applicant will  
6 have to do some calculations and get back to you on that  
7 one.

8 Mr. Moyes?

9 MR. MOYES: Thank you, Mr. Chairman. If  
10 there's no further questions for Mr. Miller regarding  
11 water, we will move back to Mr. Morgan and continue on  
12 with his environmental testimony.

13 Mr. Morgan, let's turn back to biological  
14 resources. Can you describe the analysis that was  
15 performed for that element?

16 MR. MORGAN: Sure. Thanks, Jason. Just a  
17 moment, I think the Peaks Audio folks are going to switch  
18 over the slide shows here.

19 As part of the application, Exhibits C and  
20 D both describe biological resources, and the project  
21 utilized various tools and data sources to evaluate the  
22 biology resources with the potential to be present at the  
23 project site and in the project vicinity.

24 Those tools included a review of topography  
25 and aerial imagery to analyze land use, land cover,

1 regional habitat connectivity and elevation data.

2 We also referred to the US Fish & Wildlife  
3 Service information for planning and consultation or IPAC  
4 tool, which was used to identify the list of federally  
5 designated proposed candidate threatened and endangered  
6 species that have the potential to occur in the proposed  
7 project area. That report was attached to our CEC as  
8 Exhibit C-1.

9 We also consulted the Arizona Game & Fish  
10 Department Arizona environmental online review tool,  
11 which is the ERT report, to identify potential status  
12 species with the potential to occur within three miles of  
13 the project. That ERT report also crossreferences other  
14 Game & Fish data including some of their, you know, known  
15 occurrence data about specific species, habitat  
16 connectivity, things of that nature. That report was  
17 attached to the CEC as Exhibit C-2.

18 We also in addition to all these data  
19 sources conducted a field survey of the project site in  
20 May of 2024. It was conducted by a kpe biologist. They  
21 went into the field to determine the habitat type and  
22 quality on the project site to support any conclusions on  
23 the likelihood that special status species would be  
24 present. It was determined that due to the disturbed  
25 nature of the project site and the lack of quality

1 habitat that impacts would be negligible.

2 Now, in addition to these tools we also  
3 submitted the results of that ERT report to the Arizona  
4 Game & Fish Department through their project evaluation  
5 program to solicit their input.

6 And Game & Fish responded via comment  
7 letter on June 19, 2024. That response letter was  
8 attached to Exhibit C of the CEC and some follow-up  
9 communications with Game & Fish were attached to PCE-11  
10 which was filed prior to this hearing.

11 The letter from Game & Fish included a  
12 handful of recommended best management practices for the  
13 project to minimize potential impacts to wildlife.

14 And the applicant has committed to  
15 following those recommendations which include but are not  
16 limited to maintaining a hundred-foot buffer from Greene  
17 Wash where project components would not be sited. I  
18 think you all saw Greene Wash this morning on the route  
19 tour.

20 Preconstruction surveys for special status  
21 species as well as burrow clearance surveys.

22 Designing project components, specifically  
23 power lines and the switchyard in accordance with Avian  
24 Power Line Interaction Committee, or APLIC, standards to  
25 reduce the potential for avian mortalities. As well as

1 minimizing outdoor lighting where possible to reduce  
2 potential impacts to wildlife.

3 So as was previously stated, due to the  
4 disturbed nature of the project site and the lack of  
5 quality suitable habitat, that reduces the likelihood  
6 that special species will be present on the project site  
7 and these best management practices and recommendations  
8 that we're following will further reduce potential  
9 impacts to wildlife.

10 MEMBER HILL: Mr. Chair.

11 CHMN STAFFORD: Yes, Member Hill.

12 MEMBER HILL: Mr. Morgan, how do you define  
13 the hundred-foot buffer from the wash?

14 MR. MORGAN: In what sense? As far as how  
15 we define how we measure that buffer?

16 MEMBER HILL: Uh-huh.

17 MR. MORGAN: That's a good question. I  
18 would imagine it would be from the edge of the wash  
19 which is something that we'd probably delineate  
20 preconstruction. So that would be sort of a demarcation  
21 that we would survey and then measure out.

22 MEMBER HILL: Thank you. In the tour this  
23 morning we talked a little bit about -- it looks like  
24 there actually might be more than a hundred-foot buffer  
25 if you -- so I just wanted to compliment you on that

1 because I do think that if you maintain the setbacks that  
2 you've described in the project and you're not moving  
3 south of the line, then you're actually doing a much  
4 better job.

5 And even though it may never really be  
6 habitat for special species or the special identified  
7 species, it really is kind of an important corridor for  
8 wildlife that is more general to the area and I think we  
9 heard residents talk about the significance of that. So  
10 I just want to compliment you on the potential to have a  
11 much bigger buffer than that.

12 MR. MORGAN: Great. Yeah, we appreciate  
13 that, and yes, the setbacks of our project components are  
14 substantially larger than that hundred-foot buffer,  
15 particularly in the southern portion of the project site  
16 where we control the land but aren't actually siting any  
17 project features.

18 CHMN STAFFORD: What's the distance between  
19 the existing 500kV line and that Greene Wash?

20 MR. MORGAN: That would be a bit dependent  
21 on where we're measuring it from.

22 CHMN STAFFORD: The closest point.

23 MR. MORGAN: Okay. Let me take a look.  
24 Well, I guess technically the closest point would be  
25 where it crosses just off the property to the west.

1 CHMN STAFFORD: I'm talking about in the --  
2 if you're looking at the map you can see the two areas  
3 that are farmed. The circle and the chunk of a circle,  
4 it's like a pie chart, piece of a pie chart, you can see  
5 where the line curves right there.

6 Other than the spot, the western end where  
7 it crosses it, I'm talking about where the curve is there  
8 with the 500kV line is headed west and then it curves and  
9 heads north and then west again.

10 MR. MORGAN: So where it turns west again  
11 and it's kind of near that canal, is that the point  
12 you're --

13 CHMN STAFFORD: No, the southern end where  
14 it comes, where it starts to turn north, that's a Greene  
15 Wash on the edge of the property, on the southern end of  
16 the property.

17 MR. MORGAN: It's about a little over  
18 400 feet, looks like at its closest point. That's that  
19 corner structure that then turns east.

20 CHMN STAFFORD: So it's about 400 feet, you  
21 said?

22 MR. MORGAN: Yes.

23 MR. MOYES: Mr. Chairman, Members of the  
24 Committee, we have a GIS expert from kpe. He's not  
25 testifying, but Mr. Cutter McCue is at the table and

1 is -- has a model that can run some realtime distance  
2 calculations. I believe that's what we're trying to  
3 verify at the moment.

4 CHMN STAFFORD: All right. You can have  
5 Mr. Morgan follow up if he gets the data. Because I'm  
6 looking at the map here and it shows --

7 MR. MOYES: So Mr. Chairman, if you look at  
8 the screen we have the GIS interactive map that Cutter is  
9 coordinating right now and we can do realtime  
10 calculations on any questions you might have about  
11 distances.

12 CHMN STAFFORD: Okay. Great. Because it  
13 seems like, because they want -- Game & Fish recommended  
14 a hundred-foot buffer from the Greene Wash. So you're  
15 heading north from the southern end of the property. I'm  
16 just curious as to how far -- is it -- based on what --  
17 the schematic that I saw before, I don't recall seeing  
18 anything being constructed south of that 500kV line other  
19 than the existing well.

20 MR. MORGAN: Yes, actually if you zoom out  
21 a bit, Cutter has the conceptual site plan as an overlay  
22 here. So here you can see the project features relative  
23 to the overall project boundary, the 500kV line as well  
24 as obviously some of the surrounding terrain.

25 CHMN STAFFORD: Right. So the whole -- you

1 have more than a hundred feet along the entire south end  
2 of the project, and even to the west side of that Greene  
3 Wash. You're not anywhere within a hundred feet of that  
4 at all.

5 MR. MORGAN: Yes, that is correct. And  
6 this hundred-foot buffer was a direct recommendation from  
7 Arizona Game & Fish in their letter. So that's why I'm  
8 quoting it as such, but yes, you're right. We don't have  
9 anything particularly close to Greene Wash as far as  
10 where the project components are sited.

11 CHMN STAFFORD: Okay. So I was trying to  
12 get a sense. So that seems like that turning pole, the  
13 closest part of the 500kV line is at least 400 feet from  
14 the Greene Wash. So you guys have totally complied with  
15 what Game & Fish wanted and beyond, like four times what  
16 they asked for almost.

17 MR. MORGAN: Yes, that's correct.

18 CHMN STAFFORD: Okay.

19 MEMBER LITTLE: Mr. Chairman.

20 CHMN STAFFORD: Yes, Member Little.

21 MEMBER LITTLE: This might be an  
22 appropriate time for me to ask a question that I had when  
23 we were out on our tour. And that is somebody asked  
24 about what construction access roads, or what roads would  
25 be used for construction access.



1 And the response was Montgomery exit, but  
2 then how to get from the Montgomery exit over to the  
3 project, I didn't hear the answer to that. So you  
4 anticipate going what is that, Cornman Road.

5 MR. MORGAN: Yeah, so I believe the main  
6 access to the project site is along Midway Road kind of  
7 towards the north, almost where it intersects with the  
8 natural gas line.

9 So if you zoom out a little bit more there,  
10 I believe the quickest access would be the Interstate 8  
11 exit to Montgomery Road and then Cornman Road and then  
12 Cornman to Midway.

13 MEMBER LITTLE: Okay.

14 CHMN STAFFORD: Is Cornman paved?

15 MR. MORGAN: Yes.

16 CHMN STAFFORD: Because we didn't drive  
17 down Cornman Road.

18 MR. MORGAN: We did not. However, it was  
19 the intersection where we stopped during the route tour.  
20 So that was the intersection of Cornman and Midway.

21 CHMN STAFFORD: Okay.

22 MEMBER LITTLE: So zoom out further so we  
23 can see the Montgomery exit. So the access then on  
24 Cornman would be through that neighborhood; correct?

25 MR. MORGAN: Yes, that is correct.

1 CHMN STAFFORD: And what's the speed limit  
2 on that road?

3 MR. MORGAN: I'm hearing 45 miles per hour.

4 MEMBER KRYDER: 25.

5 MR. MORGAN: 25. My apologies.

6 CHMN STAFFORD: Wasn't there a  
7 recommendation from Game & Fish about construction routes  
8 limited to 15 miles an hour?

9 MR. MORGAN: Typically those are really  
10 about on the project site and during construction to  
11 avoid, you know, any sort of sensitive species that could  
12 be in the area.

13 Generally that's not something that  
14 obviously the extent and scope of that is a matter of how  
15 they define what the actual construction site is if that  
16 makes sense. Obviously trucks that are bringing in  
17 materials from far away aren't going to be driving  
18 15 miles per hour their entire trip to the site, but that  
19 was something that would be defined.

20 CHMN STAFFORD: Right. Because this is  
21 along the right-of-way and access roads, they're not  
22 talking about roads you use to access the site, they're  
23 talking about --

24 MR. MORGAN: Correct. That's on the  
25 construction site.

1 CHMN STAFFORD: Okay. All right. That  
2 clarifies things. Thank you.

3 MEMBER KRYDER: Mr. Chairman.

4 CHMN STAFFORD: Yes, Member Kryder.

5 MEMBER KRYDER: This has -- I think I  
6 missed the ball and didn't ask the question earlier.  
7 But, and I think goes to Mr. Westbrook, yeah.

8 You're going to be buying natural gas from  
9 El Paso; right? Or whoever the pipeline is that goes  
10 through here.

11 MR. WESTBROOK: Correct. El Paso.

12 MEMBER KRYDER: Okay. And this is -- do  
13 you have long-term contracts? I mean you're going to be  
14 cranking a bit of fuel out. Is there any concern on your  
15 part or is that just something you can contractualize and  
16 El Paso delivers pretty clearly, or how does that all  
17 work? Give me a minute.

18 MR. WESTBROOK: Again, that's a question  
19 for Mr. Thompson.

20 MEMBER KRYDER: Oh, okay.

21 CHMN STAFFORD: Yes. We'll end up  
22 recalling the first panel to do some cleanup.

23 MEMBER KRYDER: Thank you.

24 MEMBER FONTES: Mr. Chairman, I did have a  
25 related question to biology if I can.

1 CHMN STAFFORD: Yes, Member Fontes. Ask  
2 away.

3 MEMBER FONTES: Questions related to bats.  
4 In my experience in this county in particular, the bat  
5 nesting and roosting and the habitat has had a lot of  
6 challenges on substation and related facilities.

7 The bat that is noted in the San Tan and  
8 the Coolidge proceedings and then they're monitoring is  
9 the Mexican free-tailed bat, which probably has the  
10 longer migratory patterns for roosting. In a previous  
11 life on another continent I actually built a power plant  
12 and we did have bat issues in cooling towers.

13 Did your analysis include the look at how  
14 the bats would impact and those other power plants  
15 referenced in the same county in the state of Arizona,  
16 possibly New Mexico and how they impacted them as well as  
17 the substations -- or the switchyard that's going to be  
18 here?

19 MR. MORGAN: So one note, this project does  
20 not have cooling towers or would not have cooling towers.  
21 But also there's a number of measures that would be taken  
22 by the project to avoid any sort of impacts to birds.  
23 There would be preconstruction nesting surveys.

24 There's also a commitment we've made to  
25 Game & Fish to inspect work areas, inspect storage areas.

1 And in addition I think with the compliance with the  
2 Aviation Power Line Interaction Committee's standards as  
3 it pertains to the design of those features to minimize  
4 impacts to avian species, I think those are pretty good  
5 commitments to avoid any sort of impacts to birds or  
6 bats.

7 MEMBER FONTES: Particularly concerned with  
8 the lighting because you have the proximity of the BESS  
9 with the power plant there as well as the switchyard.

10 How is the design going to incorporate to  
11 minimize the impact that lighting could attract the bat  
12 in that area?

13 Again, having worked and been involved in  
14 maintenance with Western Area Power Administration in  
15 this county on substations, it's a major issue. And  
16 you're going to have safety and security concerns with  
17 lighting.

18 I'd ask the applicant to think carefully  
19 through that in terms of the final placement of this,  
20 because that could have an impact on biology as well as  
21 balancing that out with safety and securing.

22 MR. MORGAN: Sure. And that is noted and  
23 we are developing lighting strategies that help mitigate  
24 potential impacts on animal species, wildlife species, so  
25 that could include things like shielding or

1 motion-activated security lighting that wildlife doesn't  
2 trigger. Things like that to make the project more  
3 sensitive from a lighting perspective.

4 MEMBER FONTES: It's also known that noise  
5 impact and particularly white noise impacts the bats  
6 during the mating and the migratory system seasons and  
7 that's during the summer months. Did your analysis look  
8 at that?

9 MR. MORGAN: We did not specifically look  
10 at noise impacts from white noise to bats. However, we  
11 have looked at, you know, generally impacts to avian  
12 species and wildlife, and we think that our work --  
13 continuing to work with Game & Fish through the process  
14 following their recommendations and continuing to consult  
15 with them in the sort of preconstruction and construction  
16 process will help minimize any potential impacts.

17 MEMBER FONTES: I would like to ask that  
18 that be looked at prior to construction, because it has  
19 been such a material issue and it is noted in the avian  
20 standards, in particular at the DOE level, and it's a  
21 real issue.

22 So I don't know how we do that,  
23 Mr. Chairman, but I want to come back to that as a  
24 preconstruction requirement.

25 CHMN STAFFORD: All right. Do bats count

1 as avian species? I thought they were mammals. I  
2 thought avian referred to birds, not just flying  
3 creatures.

4 MEMBER FONTES: I guess -- I don't know  
5 where it falls, but the issue is it's an issue that I  
6 think needs to be addressed for -- in terms of biology,  
7 in terms of how this is going to be sited, located, and  
8 operated.

9 CHMN STAFFORD: Yeah. Definitely. I'm  
10 not --

11 MEMBER FONTES: I -- references to it;  
12 that's why I brought it up.

13 CHMN STAFFORD: Right, because I'm  
14 trying -- I can't flip through this application binder as  
15 fast as I'd like, but I don't recall seeing --

16 MEMBER FONTES: Again, I did a control-F  
17 and I didn't see any references -- --

18 CHMN STAFFORD: Yeah, I don't recall seeing  
19 any references to bat species in the biological analysis.

20 MR. MORGAN: Yeah, we could cross-reference  
21 the species list, but it might just not be considered a  
22 species of concern in the project area. It might not  
23 have been added to the list that we received when we  
24 consulted the databases from Game & Fish and from US Fish  
25 & Wildlife.

1 MEMBER FONTES: I understand that it may  
2 not be in the database but I would expect that you would  
3 look at the neighboring utility substation findings as  
4 well as the other power plants to see what issues they've  
5 had. And it's certainly been noted there and in the  
6 general media, I believe.

7 CHMN STAFFORD: Right. I think the closest  
8 power plant is the SRP.

9 MEMBER FONTES: San Tan.

10 CHMN STAFFORD: No, what's it called?  
11 It's --

12 MEMBER FONTES: Coolidge.

13 CHMN STAFFORD: No, it's not Coolidge, it's  
14 one even closer --

15 MR. MORGAN: Desert Basin.

16 CHMN STAFFORD: Desert Basin. I think it's  
17 the same -- it's two of the same units, the LM6000s. Is  
18 that correct? Is Desert Basin two LM6000s?

19 MR. WESTBROOK: That's correct.

20 CHMN STAFFORD: Okay. All right. And then  
21 so you're talking about lighting effects. You're talking  
22 about lighting effects on --

23 MEMBER FONTES: Lighting, white noise and  
24 then also potential for roosting, getting attracted to  
25 water and heated moist areas.



1 CHMN STAFFORD: Yeah. Okay. I'm moving on  
2 to a different topic about lighting. You've been talking  
3 about lighting for wildlife. What about lighting for  
4 purposes of the people who live in the neighbor -- nearby  
5 that the plant will be in their viewshed?

6 I seem to recall that came up a bit at the  
7 Coolidge expansion, and I can't recall off the top of my  
8 head what their solution was to mitigate the lighting so  
9 they didn't have this brightly lit-up plant that  
10 interfered with people's night views and things like  
11 that.

12 Have you looked at that as part of your  
13 analysis as well?

14 MR. MORGAN: Sure. And there are a handful  
15 of project features that are a little bit different here  
16 than maybe some of the other plants that you've looked at  
17 in the past. For example, the height of the exhaust  
18 stacks here are 65 feet. And during normal operations  
19 those would not be illuminated. They would only really  
20 need to be illuminated, and I think Garen might have  
21 testified to it yesterday, but during annual or biannual  
22 EPA inspections, so that's the only time when we would  
23 need the lighting on top of the stacks.

24 In addition some of the external lighting  
25 will be designed to be shielded and diffused, so it will

1 just project less onto the surrounding landscape, so  
2 there are a number of commitments on the lighting from a  
3 lighting perspective.

4 And in addition, they'll also be -- the  
5 project will be designed in accordance with the Pinal  
6 County Development Services Code to include any sort of  
7 conditions they have related to lighting and exterior  
8 lighting.

9 CHMN STAFFORD: Okay. And while you're  
10 working through that I'm assuming that you'll consult  
11 with the local townsfolk who will be impacted by the  
12 decision?

13 MR. MORGAN: Yes. And we also we have  
14 conducted a robust public process which I'll get to later  
15 on in my testimony as well.

16 CHMN STAFFORD: I know we've got a few  
17 things yet to get to.

18 MR. MORGAN: Just a few more.

19 CHMN STAFFORD: Mr. Moyes, please proceed.

20 MR. MOYES: Thank you, Mr. Chairman.  
21 Steve, are you prepared now to talk about visual  
22 resources?

23 MR. MORGAN: Yes. I am. And if the Peaks  
24 Audio team could switch back here. Thank you.

25 CHMN STAFFORD: Actually I think it's a

1 good time for a break. We've been going for  
2 approximately 90 minutes, maybe more.

3 So I think this is a perfect segue to --  
4 you can get set up for the next part of the slide show  
5 and our court reporter can take a well-deserved break for  
6 about 10 to 15 minutes. So we stand in recess.

7 (Recess from 3:05 p.m. to 3:33 p.m.)

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

10 MR. MOYES: Thank you, Mr. Chairman. We  
11 were finishing up a discussion on wildlife and biological  
12 resources. Mr. Morgan, was there anything else that you  
13 wanted to follow up regarding Game & Fish's  
14 recommendations for species?

15 MR. MORGAN: Sure. Just that part of those  
16 recommendations are going to be implementing a program  
17 where we not only are surveying for special status  
18 species, but in the event that you do have an incidental  
19 discovery, there's going to be all sorts of protocols in  
20 place to avoid that species, whether it's a nesting bird  
21 or a bat or whatever it may be, and handle that  
22 accordingly.

23 And we will coordinate with Arizona Game  
24 and Fish, follow all of their recommendations and also  
25 consult with them prior to construction to make sure that

1 we're implementing those recommendations and designing a  
2 program that helps limit any potential impacts on  
3 wildlife.

4 MR. MOYES: Thank you. And now if we have  
5 the slides ready to go, I believe we're ready to move on  
6 to visual resources. Take it away, Mr. Morgan.

7 MR. MORGAN: Thanks, Jason.

8 So visual resources are described in  
9 Exhibit E of the application. To analyze impacts to  
10 visual resources we selected five key observation points,  
11 I'm going to call those KOPs from here on, surrounding  
12 the project site.

13 The KOP map can be seen on the left and  
14 right screen.

15 So as you can see we picked five different  
16 KOPs surrounding the project. We wanted them to be  
17 spread out, but also to represent views that are likely  
18 to be encountered by residents or motorists.

19 And I'll just do a quick summary of the  
20 five and then we'll kind of go one by one and we'll show  
21 you the proposed view on the left screen, and the -- or  
22 I'm sorry, the existing view on the left screen and the  
23 proposed view on the right screen.

24 So I'll start off by just giving a summary.  
25 So KOP-1 is north of the project and it is looking

1 southeast from West Selma highway.

2 KOP-2 is looking northwest from the  
3 intersection of Cornman Road and South Mammoth Drive, and  
4 that's in the residential area to the east of the project  
5 site.

6 KOP-3 is looking northwest from the  
7 Interstate 8 offramp onto Montgomery Road.

8 KOP-4 is looking north/northeast from  
9 Interstate 8.

10 And then KOP-5 is looking east from South  
11 Russell Road.

12 And also, one thing I wanted to highlight  
13 just because we've been doing a lot of questions on  
14 distances, we do have the ability to do some live  
15 measurements, but one thing that I found useful in this  
16 particular area is the blocks are gridded, so the  
17 distance from Midway to Montgomery is one mile.

18 And then the distance from Midway to 2 is a  
19 half mile. So just as you look through some of these I  
20 think that might be kind of a useful frame of reference.  
21 I know it was for me.

22 MEMBER GOLD: Mr. Chairman.

23 CHMN STAFFORD: Member Gold.

24 MEMBER GOLD: Do those points coincide with  
25 residences?

1 MR. MORGAN: So these are all taken from  
2 public right-of-way.

3 MEMBER GOLD: Okay. Rephrase the question.  
4 People's houses. How many of those points are actually  
5 on people's houses or their driveways or the street right  
6 in front of their house looking into your proposed plant?

7 Which points coincide with somebody's  
8 house?

9 MR. MORGAN: So KOP-2 is the one that is  
10 representative of the most residents, especially ones  
11 that we heard from last night. A lot of those folks live  
12 in the area to the east of the project. Whispering Sands  
13 is a road that a lot of folks live on as well as South  
14 Mammoth Drive. So those are the two areas that are near  
15 that KOP-2, as KOP-2 is on the intersection of Cornman  
16 and South Mammoth Drive.

17 So that is the view that kind of represents  
18 the view for a lot of the residents.

19 MEMBER GOLD: Are there any residences that  
20 are not in KOP-2? Where would they be?

21 MR. MORGAN: There is a small cluster of  
22 residents to the northwest of the project site. Their  
23 view will be somewhat similar to the view from KOP-1.  
24 There also are some residents north of West Selma Highway  
25 that are also representative, represented kind of by that

1 KOP-1 view.

2 MEMBER GOLD: Okay. Question: Why didn't  
3 you include views from those resident addresses or  
4 resident areas?

5 MR. MORGAN: So typically one of the issues  
6 is just making sure we're taking them from public  
7 right-of-way. And we also just want to have a even  
8 distribution of sites around the project facility.

9 MEMBER GOLD: Okay. Here's my point again.  
10 Public right-of-way is a very nice place and real easy to  
11 take a picture from a roadway. But I'm dealing with  
12 people who are in the audience who have homes there. And  
13 I would just be curious for a moment, does KOP-2 cover  
14 the area where you folks live? I'm going to turn around  
15 and just look for hands.

16 (Indiscernible voices in background.)

17 MEMBER GOLD: Please show KOP-2 to the  
18 people here.

19 MR. MORGAN: So KOP-2 is at the  
20 intersection of Cornman Road and South Mammoth Drive.

21 MEMBER GOLD: Just use a laser pointer,  
22 please. Yeah, put it on this map because that's where  
23 they're sitting.

24 MR. MORGAN: We have different laser  
25 pointers for the different screens here.

1 MEMBER GOLD: How about -- you're tall, how  
2 about just going over there, standing up and pointing so  
3 they can see it, please, Mr. Morgan.

4 He's pointing to KOP-2. Okay. So  
5 that's --

6 CHMN STAFFORD: All right. Hang on. We're  
7 not doing public comment right now, Member Gold.

8 MEMBER GOLD: I'm sorry.

9 CHMN STAFFORD: Please direct where you'd  
10 like Mr. Morgan to point.

11 MEMBER GOLD: Okay.

12 CHMN STAFFORD: I believe he's got the  
13 laser pointer working now. Almost. There it goes.

14 MEMBER GOLD: Okay. So that's KOP-2. Now,  
15 where are the other homes that you found?

16 MR. MORGAN: There are some -- there are a  
17 cluster of residences here and here. So this view is  
18 representative of those residences.

19 MEMBER GOLD: Okay. Does that cover your  
20 houses?

21 A VOICE: Yes.

22 MEMBER GOLD: Okay. In that case you've  
23 done what you needed to do. Thank you.

24 MR. MORGAN: Great. So if there aren't any  
25 further questions of just the overview, I'm going to



1 start going through these KOPs.

2 So I will start with KOP-1. And, again,  
3 this is from West Selma Highway looking southeast towards  
4 the project site.

5 And on your left screen on L41 you're going  
6 to see the existing view, and on R41 you're going to see  
7 the proposed view.

8 So if you remember from the route tour this  
9 is the dirt road that we were on this morning. Obviously  
10 in the existing view you can see that existing 500kV  
11 transmission line. And then in the proposed view you can  
12 see the project components simulated into the landscape.

13 MEMBER KRYDER: Mr. Morgan -- I'm sorry.  
14 Mr. Chairman.

15 CHMN STAFFORD: Yes, Member Kryder.

16 MEMBER KRYDER: Mr. Morgan, would it be  
17 possible to swap the location of those two screens so  
18 that the projected -- so that the projected one was over  
19 here on this screen, so that the folks back here might be  
20 able to see it a bit clearer.

21 MR. MORGAN: I believe that Peaks Audio  
22 indicated that they can accommodate that.

23 MEMBER GOLD: They just did it.

24 MEMBER KRYDER: Hot dog. Okay. You're  
25 great.

1 MEMBER GOLD: So, Mr. Chairman.

2 CHMN STAFFORD: Yes, Member Gold.

3 MEMBER GOLD: So if you're looking from the  
4 north down south, this is what they're going to see if  
5 they live in that area to the north. They will see  
6 transmission lines, looks like a whole farm of them now  
7 as opposed to one, two, three, four, five, roughly five  
8 that you can see beforehand. And it looks like the  
9 stacks from your -- stacks from your turbines and to the  
10 left of it that would be the battery building? Am I  
11 reading that correctly?

12 MR. MORGAN: No, the battery would actually  
13 be to the right or to the west of the substation.

14 MEMBER GOLD: So to the right of those  
15 stacks --

16 MR. MORGAN: So if you're going left to  
17 right --

18 MEMBER GOLD: Wait. How about taking your  
19 pointer again and just point at what we're looking at,  
20 please.

21 MR. MORGAN: Sorry. There's always a  
22 moment of lag with this pointer.

23 So these are the stacks here. This is the  
24 switchyard. The battery is not really visible. It  
25 doesn't have a very high -- it's not very tall above

1 ground level and there's kind of some intervening  
2 vegetation and terrain here.

3 MEMBER GOLD: Okay. Now, that battery  
4 building is going to be surrounded by some kind of block  
5 wall, I'm assuming.

6 MR. MORGAN: No, there would not be a wall  
7 around the batteries.

8 MEMBER GOLD: Why not?

9 MR. MORGAN: It's metal enclosures around  
10 the battery units.

11 MEMBER GOLD: Yeah. Well, if the whole  
12 thing goes up, the metal enclosures, are they going to  
13 stop explosions from going beyond them because they are  
14 part of the casing of the bomb?

15 MR. MORGAN: Now, I do think if we're going  
16 to have an extended conversation about the technology, I  
17 think it's better suited for when Mark and Garen are  
18 potentially back on the stand at a later time.

19 MEMBER GOLD: Okay. We'll wait until then.

20 MR. MORGAN: I'll do as much as I can  
21 answering questions about the project components. And I  
22 can --

23 MEMBER GOLD: Okay. So right now it's  
24 pretty low. You can bare -- you can't even see the top  
25 of it.

1 MR. MORGAN: Yes, that's correct. You can  
2 almost see it. There's kind of like a bit of white or  
3 gray that you can see. But it's quite low. It's hardly  
4 above the level of the vegetation.

5 MEMBER GOLD: Now, it looks like there's  
6 some kind of berm in between us and the first berm, and  
7 then there seems to be a valley and then a second berm of  
8 some sort closer to your project. Is that accurate?

9 MR. MORGAN: Yes, we did notice when we  
10 took the photos, the simulations, that there are from a  
11 couple different angles some -- some sort of berms built  
12 into the landscape. We think some of those might be from  
13 historical agriculture activities if that makes sense.  
14 There might be some -- some grading and leveling that  
15 might have occurred, creating some steps and kind of  
16 intervening terrain.

17 MEMBER GOLD: So if the berms sort of  
18 exist, if you could make the berms higher I'm guessing if  
19 it was something you chose to do or if there was a reason  
20 to protect it from flooding or maybe to make the views  
21 better where you don't see the tanks, all you'll see is  
22 the tops of the stacks. Is that possible?

23 MR. MORGAN: Well, some of those -- grading  
24 and drainage tends to be dealt with in the county zone  
25 change process. They'll have a drainage plan and a

1 grading plan to sort of determine some of those things.

2 MEMBER GOLD: So that means it is possible  
3 to just put the berms around it to make it look a little  
4 better, see less buildings and more hills?

5 MR. MORGAN: To an extent. I think there's  
6 some ways that you could try to screen it.

7 MEMBER GOLD: Oh, that's the proper word.  
8 Thank you, Mr. Morgan. The word is screen it. Now I  
9 have a question for Mr. Chairman.

10 CHMN STAFFORD: Yes.

11 MEMBER RICHINS: Mr. Gold.

12 MEMBER GOLD: Is that in our purview --

13 MEMBER RICHINS: Mr. Gold.

14 CHMN STAFFORD: One second.

15 MEMBER RICHINS: I just -- just going to  
16 give him a quick reference of the San Tan Bella Vista.

17 MEMBER GOLD: Wait. Who's talking?

18 CHMN STAFFORD: This is Member Richins.

19 MEMBER GOLD: Oh, go ahead, Member Richins.

20 MEMBER RICHINS: Yeah, just giving you a  
21 reference. The San Tan plant on Bella Vista Road in I  
22 think it's Gilbert has the berming that you're  
23 describing, as a point of reference for you.

24 MEMBER GOLD: Oh, so it's already something  
25 that these plants are doing. Thank you, Member Richins.

1 MEMBER RICHINS: You're welcome, sir.

2 MEMBER GOLD: Mr. Chairman, is there a way  
3 that this Committee is permitted to say we recommend  
4 berms or something like that?

5 CHMN STAFFORD: We can make it a condition.

6 MEMBER GOLD: Thank you, Mr. Chairman, and  
7 thank you, Mr. Morgan.

8 MEMBER MERCER: Mr. Chairman.

9 CHMN STAFFORD: Yes, Member Mercer.

10 MEMBER MERCER: I just want to -- I guess I  
11 have a couple of questions. In this picture that the  
12 dirt or the berm, what's the distance if you're standing  
13 in Selma Highway to the plant?

14 MR. MORGAN: Sure. So the distance from  
15 this particular KOP, one moment, I do have that here. So  
16 from KOP-1, the distance to the project boundary is  
17 2360 feet. And the distance to the turbines and the  
18 stacks is 3355 feet due to that setback on the northern  
19 edge of the property.

20 So for frame of reference, the stacks  
21 you're seeing there are 3,355 feet from where the photo  
22 was taken.

23 MEMBER MERCER: Okay. Thank you. So what  
24 Member Gold was asking berm around the facility, the  
25 plant, is that vegetation or is that dirt?

1 MR. MORGAN: In the foreground is the dirt  
2 along the roadway. There is a berm along the roadway.  
3 And then there is just some intervening vegetation and  
4 terrain kind of between that berm and the project  
5 boundary.

6 MEMBER MERCER: Okay. Thank you.

7 MEMBER KRYDER: Mr. Chairman.

8 CHMN STAFFORD: Member Kryder.

9 MEMBER KRYDER: Following up on that, in  
10 the final plan is this vegetation that's out, or the  
11 front of the KOP here, planning to stay?

12 Are you going to grade this out or are you  
13 going to plant nice evergreen trees or, fill in the  
14 blank, what's the plan for the distance between here and  
15 the facility?

16 MR. MORGAN: I don't have the details for  
17 their sort of landscaping plan. I'm not sure if they've  
18 developed that quite yet. However, typically this type  
19 of intervening vegetation especially if it's outside of  
20 the fence line is usually maintained. However,  
21 vegetation within the fence line is typically removed  
22 just for, you know, grading the site and also for, you  
23 know, fire safety and other things like that.

24 MEMBER KRYDER: But outside it may just  
25 leave it native desert?

1 MR. MORGAN: Sure. Yes.

2 BY MR. MOYES:

3 Q. Mr. Morgan, isn't it true that from this KOP  
4 there's approximately -- I don't have the exact  
5 distance -- but approximately half a mile of land that is  
6 not on the project site that we are seeing, in fact,  
7 showing the vegetation on the screen? Is that correct?

8 A. (Mr. Morgan) Yes, that is correct. Most of the  
9 vegetation visible in the foreground of this photo and  
10 even the middle ground is north of the project and would  
11 not be developed. So none of that would be cleared.

12 CHMN STAFFORD: Who currently owned that  
13 land?

14 MR. MORGAN: That's a good question. I  
15 think it's private land and owned by some private  
16 landowner. I don't have the name.

17 CHMN STAFFORD: That narrows it down. We  
18 know it's private land because we know it's not --  
19 definitely not state trust land or federal land. But  
20 it's currently vacant land. I just -- and I'm sure we  
21 did look at this before on other maps about planned use.  
22 I think it's just -- it's either zoned the same as the  
23 plant land is currently.

24 MR. MORGAN: Correct.

25 CHMN STAFFORD: As I understand. So it



1 could be, I guess -- I guess my thought is is that this  
2 is probably something that the cleanup panel can cover is  
3 who owns that land and kind of refresh our memories, who  
4 owns it and what they're planning to do with it.

5 I mean, I guess ideally it would remain  
6 vacant or have something on it that obscures the view of  
7 the plant. But I can't see someone wanting to buy that  
8 up and put a bunch of houses on it right next to the  
9 plant after its built. So --

10 MEMBER RICHINS: Chairman.

11 CHMN STAFFORD: Yes, Member Richins.

12 MEMBER RICHINS: Selma Midway, LLC out of  
13 Mesa. That's 196 acres, there's -- just to the south of  
14 that between the subject site and Selma Midway, LLC  
15 property is an El Paso natural gas easement.

16 CHMN STAFFORD: Right. You can see the  
17 natural gas going through there, so that's another reason  
18 you probably won't see a lot of residential development  
19 in that area.

20 MEMBER RICHINS: Yeah, the small triangle  
21 south of the easement and then the larger portion is all  
22 Selma Midway, LLC, which would lend me to believe that  
23 it's a commercial interest of some kind holding it.

24 CHMN STAFFORD: All right. And we don't  
25 know what their plans for development are because we

1 haven't spoken to them specifically about what their  
2 intentions are with that plot; correct?

3 MR. MORGAN: Correct.

4 CHMN STAFFORD: All right.

5 MEMBER GOLD: Mr. Chairman.

6 CHMN STAFFORD: Yes, Member Gold.

7 MEMBER GOLD: One question that I would  
8 like to ask Mr. Morgan now. How tall are those  
9 structures? Not the stacks for your generators, but the  
10 actual building structures? How tall are they? So if we  
11 were going to say berm, we'd give a rough idea how tall  
12 it should be.

13 MR. MORGAN: I have a few measurements for  
14 reference here. The stacks as we've previously stated  
15 are 65 feet.

16 MEMBER GOLD: So that's -- they're going to  
17 be there.

18 MR. MORGAN: The tallest proposed structure  
19 that's part of the project is 90 feet. And that would be  
20 some of the transmission infrastructure.

21 MEMBER GOLD: We're not talking about that.

22 MR. MORGAN: The tallest structure in the  
23 landscape is actually the existing 500kV, which is  
24 140 feet.

25 MEMBER GOLD: No, I'm talking about the

1 buildings.

2 MR. MORGAN: The buildings themselves.

3 CHMN STAFFORD: Are those tanks in the  
4 foreground that we can see, the closest --

5 MR. MORGAN: Yes, that is correct.

6 CHMN STAFFORD: Okay. I guess the height  
7 of the tanks is what you're looking for; right, Member  
8 Gold?

9 MEMBER GOLD: Yes. Thank you,  
10 Mr. Chairman.

11 MR. MORGAN: I've been told it's 52 feet.

12 MEMBER GOLD: The tanks are 52 feet tall?

13 MR. MORGAN: 52 feet.

14 MEMBER GOLD: 52 feet?

15 MEMBER KRYDER: Okay.

16 MR. MORGAN: And the tallest buildings are  
17 24 feet.

18 CHMN STAFFORD: Okay.

19 MEMBER GOLD: Storage tanks, 50 feet.

20 Buildings. How tall were the buildings?

21 MR. MORGAN: 24.

22 MEMBER GOLD: 24 feet. So we got 50 feet  
23 and 24 feet, and the stacks, we're not going to bother  
24 dealing with.

25 CHMN STAFFORD: 65.

1 MEMBER GOLD: How tall are the stacks  
2 again?

3 CHMN STAFFORD: 65.

4 MEMBER GOLD: Something's not right. If  
5 the storage tanks are 50 and the tanks are only 15 feet  
6 taller, how much of the storage tanks are already being  
7 covered by the berm?

8 CHMN STAFFORD: They are closer to the  
9 viewpoint, though.

10 MR. MORGAN: Yeah, that could -- part of  
11 that is just perspective as far as where they are  
12 relative to each other.

13 MR. MOYES: Mr. Chairman, with your  
14 permission I think there's a misconception of what looks  
15 like a berm closer to the plant site, which is actually  
16 just vegetation close enough together that it's causing a  
17 brown look, but there's not, in fact, a tall berm along  
18 that that would --

19 MEMBER GOLD: Okay. So there's no berm now  
20 but there obviously could be a berm, something to mask  
21 this building and structures a little.

22 MR. MOYES: The berms that Mr. Morgan, and  
23 I'll have him confirm we're talking about were small,  
24 most likely irrigation boundaries or ditch berms or flood  
25 irrigation boundaries --

1 MEMBER GOLD: I'm referring --

2 MR. MOYES: -- they have historically been  
3 used not the type of berms that would be high enough to  
4 see from this KOP.

5 MEMBER GOLD: Well, then I would be  
6 referring to the berms Mr. Richins -- Member Richins was  
7 discovering around some similar plants to yours.

8 Member Richins, are you there? How tall  
9 are those berms?

10 MEMBER RICHINS: The ones around Bella  
11 Vista are probably in the neighborhood of 20 to 25 feet.  
12 And they're vegetative all around it. They sit right --  
13 that plant sits right in the middle of a bunch of  
14 single-family homes that are between 700 and 1400 feet  
15 away from the plant.

16 CHMN STAFFORD: It's about two miles from  
17 my house. I'm familiar with that plant.

18 MEMBER RICHINS: There you go.

19 CHMN STAFFORD: Yeah, it has a significant  
20 berm of trees planted along the top. You can't see the  
21 plant when you get close to it. You can see it from  
22 further away, but when you're in the neighborhood near it  
23 it's totally -- the view of the plant is totally  
24 obscured. And that is, that's the San Tan plant. It's a  
25 couple combined cycle units so it's a bit different than

1 this setup.

2 But it's two pretty significantly sized  
3 combined cycle units.

4 MEMBER GOLD: Mr. Chairman, so if we would  
5 put berms equivalent in size to that say around 20-plus  
6 feet and trees on top, we would mask a heck of a lot of  
7 this.

8 CHMN STAFFORD: Oh, yeah. And I don't  
9 know -- I'm not entirely sure the type those are. I  
10 don't know if that height would be -- if you'd need more  
11 or less from this distance to obscure it.

12 But I think that's something that perhaps  
13 the applicant could address on in the next -- maybe the  
14 cleanup panel when they have the people come back so they  
15 can think about or do some measuring and figure out -- I  
16 guess they could even conceivably redo the view from this  
17 KOP with the simulated berm of a specified size or  
18 something to see what that would do to the viewshed.

19 MEMBER SOMERS: Mr. Chair.

20 CHMN STAFFORD: Yes, this is Member --

21 MEMBER SOMERS: Somers.

22 CHMN STAFFORD: Somers. Okay. Thank you.  
23 Member Somers.

24 MEMBER SOMERS: So we -- I don't live all  
25 that far from you, although I'm on the Mesa side. I was

1 just looking up the San Tan generating station.  
2 Apparently a CEC was issued some time around 2001.  
3 Wonder if it would be useful to review that where it  
4 comes to dealing with the berms, landscaping. They also  
5 have something in here about having a community committee  
6 that this Committee might want to consider.

7 CHMN STAFFORD: It's like you're reading my  
8 mind. That was my intention to thoroughly review that  
9 certificate prior to us voting on this certificate.

10 MEMBER HILL: Mr. Chair.

11 MEMBER SOMERS: So if staff could send that  
12 out, that would be great. Also make sure that the  
13 applicant receives it, see what they think.

14 CHMN STAFFORD: Well, it's a public record.  
15 It's available on the Commission website. So the  
16 applicant already has it. What I can do is I could  
17 have -- we could take official notice of that Decision  
18 and then I can have Tod circulate a link to the members  
19 so they can access it. I'm sure Mr. Moyes has already  
20 seen it.

21 MEMBER SOMERS: Thank you, Chair.

22 CHMN STAFFORD: And after the next break  
23 I'll come back and let you know the decision number  
24 unless someone else who has a computer in front of them  
25 beats me to it.

1 But I believe Member Hill has a question.

2 MEMBER HILL: My question was if Mr. Somers  
3 is looking at it what the decision number was, that was  
4 going to be my request.

5 MEMBER HILL: Mr. Chairman.

6 CHMN STAFFORD: Member Little.

7 MEMBER LITTLE: As I recall that -- I  
8 haven't -- don't live in that area but I was around at  
9 that time. As I recall most of the vegetation that -- at  
10 that particular substation requires water.

11 CHMN STAFFORD: Yes, it does. It is -- the  
12 landscaping is maintained I believe by SRP. But I think  
13 in the situation here they wouldn't be building something  
14 between KOP and the project boundary. It would have to  
15 be something that would be on the project boundary that  
16 they would -- in the land that the applicant owns, they  
17 would be able to construct and maintain.

18 They wouldn't be able to do anything unless  
19 they expanded the project area to include additional land  
20 which I don't think they have any intention to do. It  
21 would have to be something that you addressed on the --  
22 on their side of the boundary.

23 BY MR. MOYES:

24 Q. Mr. Morgan, I'm going to ask you a difficult  
25 question for you to give an opinion on.



1 But based on our site control and the boundaries  
2 that we have, we actually have ownership over, it would  
3 take a pretty unreasonably high berm along the edge of  
4 our project boundary to be able to obscure view of any of  
5 our facilities from a KOP this far back. Would you  
6 agree?

7 A. (Mr. Morgan) Yes. That is correct.

8 Q. And from any of the nearby residences would that  
9 equally be true, that a berm would have to be I can't  
10 give you a number, but a 50-foot berm or higher to be  
11 able to completely obscure any view of the plant would  
12 probably be required based on how far back any residences  
13 are and especially from how far back our KOP visuals are.  
14 Is that accurate?

15 A. (Mr. Morgan) Yes, that is correct, and I think  
16 the berm would have to be roughly the size of some of the  
17 structures that it was intended to obscure, right.

18 MEMBER HILL: Mr. Chair.

19 CHMN STAFFORD: Yes, Member Hill.

20 MEMBER HILL: I'd like to revisit the berm  
21 idea for certain -- maybe certain portions of the  
22 property. I know that it might not be practical to  
23 obscure the view of the entirety of the plant, but any  
24 improvements in visual experience might be beneficial to  
25 some of the residents.

1           The other reason that I really like the  
2 berm is we've heard consistently about how sound travels  
3 across this area, and berms actually can reduce the  
4 travel of sound and noise. So the berm might actually  
5 serve a couple of purposes.

6           It may not -- it may not obscure the  
7 entirety of the plant, but it might actually provide some  
8 aesthetic improvement as well as some reduction in travel  
9 of sound. So I just think that we should leave that on  
10 the table for discussion.

11           MEMBER GOLD: Mr. Chairman.

12           CHMN STAFFORD: Member Gold, Member Mercer  
13 has been waiting to ask a question. We'll let her go.

14           MEMBER MERCER: Okay. Let's say that  
15 Mr. Moyes mentioned a 50-foot berm. That tank right in  
16 the middle of the picture is 50 feet tall; right?

17           MR. MORGAN: Yes, that is correct, 52 feet.

18           MEMBER MERCER: So just picture a berm is  
19 going to cover those mountains; right?

20           MR. MORGAN: Yes, that is correct. I mean,  
21 some of the transmission infrastructure obviously you can  
22 still see through pieces of it, portions of it; right,  
23 where it's just conductor.

24           MEMBER MERCER: And if I'm looking at it in  
25 a straight line, that Mesa mountain is going to be

1 covered.

2 MR. MORGAN: Yes, I think that's correct,  
3 particularly to the right and also to the left, really,  
4 but I agree you're right, you'd be obscuring quite a bit  
5 of the view in the background of this KOP.

6 MEMBER MERCER: So if the biggest eyesore  
7 is the buildings, that's probably the best place to put  
8 the berm on, not in front of the mountains. Just  
9 something to think about.

10 CHMN STAFFORD: Right. I guess there's no,  
11 it's impractical to say they have a berm to obscure the  
12 entire plant. I think something -- you wouldn't -- that  
13 wouldn't be realistic especially from this distance, but  
14 certainly something could partially obscure it, and I  
15 think the sound would be something, too, that would be --  
16 is there something that could be -- I think they -- I  
17 seem to recall Coolidge, they ended up putting a wall up.

18 But the people were much closer to the  
19 plant, but they ended up building -- the condition was  
20 they were going to put a significant wall that would  
21 baffle the sound from the community of Randolph that was  
22 right next to it.

23 And I mean, people here are further away  
24 than they were in that situation, but it seems there  
25 could be something put there other than, you know, space

1 and a chain-link fence that could address probably more  
2 the sound than the visual impacts.

3 MEMBER GOLD: Mr. Chairman.

4 CHMN STAFFORD: Yes, Member Gold.

5 MEMBER GOLD: I agree wholeheartedly, and I  
6 agree with Member Hill and I agree with Member Somers  
7 stated that a berm that would cover the buildings, not  
8 the transmission lines, not the switchyard. But just the  
9 buildings would serve a purpose to obscure the view of  
10 buildings, deaden the sounds, and it's something that's  
11 done on other areas.

12 So I would again recommend that we do  
13 something like that. Doesn't have to be 50 feet tall.  
14 25 feet tall, 30 feet tall. 20 feet tall. Something  
15 like that. To simply make an effort not to totally  
16 destroy people's views from their houses. Just a  
17 suggestion, Mr. Chairman.

18 CHMN STAFFORD: Thank you.

19 MR. MORGAN: One note on the berm.  
20 Something like a berm when you're up close to the  
21 facility would obscure it, but from these distances, the  
22 distance of this KOP, which is roughly similar to the  
23 distances to the residences to the east, it would not  
24 really obscure the entire facility, just based off of  
25 perspective.

1 I also think with some of the screening and  
2 fencing stuff, a lot of that gets dealt with through the  
3 county zone change process as you're dealing with your  
4 site plan and you have to modify county standards for  
5 things like perimeter fencing and different ways to  
6 approach, you know, site security, lighting, fencing, all  
7 these sort of details. So a lot of times that gets  
8 ironed out during the county zone change process.

9 BY MR. MOYES:

10 Q. Mr. Morgan, if you had a large dirt berm out  
11 there, unless it was actively landscaped and actively  
12 watered using additional water resources, isn't it  
13 conceivable that a large berm, a 50-foot berm if we want  
14 to call it that, it would likely contribute to additional  
15 dust dispersion in the air considering the prevalent wind  
16 activity in the area?

17 A. (Mr. Morgan) Yes, I would have concerns with  
18 dust as well as erosion and drainage. And then obviously  
19 I know there was also mentioned potential landscaping on  
20 that berm and obviously we know how sensitive water use  
21 is here, and I think that additional water use would  
22 probably also be an issue with a vegetated berm.

23 MEMBER GOLD: Just again, Mr. Chairman, I  
24 don't think a 50-foot berm is realistic unless you're  
25 trying to make a garbage dump or a tailings for a mine.

1 I think a 20-foot berm, a 25-foot berm to cover at least  
2 a portion of the building, something to obscure it so  
3 that we don't just say to heck with the residents who  
4 have to look at it. And I think that is something you  
5 should consider, so I am making that statement,  
6 Mr. Chairman, representing the people of the state of  
7 Arizona who I represent.

8 MEMBER LITTLE: Mr. Chairman.

9 CHMN STAFFORD: Thank you, Member Gold.  
10 Member Little.

11 MEMBER LITTLE: Instead of a berm perhaps a  
12 wall might be considered. There's a big substation that  
13 I pass on a regular basis that has a brick wall in front  
14 of it and it makes a huge difference when you're  
15 relatively close, obviously from this distance.

16 But I think it still would be much more  
17 attractive than just what we're seeing up there.

18 MR. MORGAN: I do think the challenge here  
19 is that most of the residents and receptors are about a  
20 half mile to a mile away. So some of those features like  
21 you said are better up close.

22 I think this conversation could also  
23 benefit from seeing the rest of the KOPs and some other  
24 sort of visual angles of this site so we can see how  
25 those project components look from different angles in

1 the project vicinity.

2 CHMN STAFFORD: Please proceed.

3 MR. MORGAN: Thank you. So I will now move  
4 to KOP-2. And as you can see, KOP-2 is the one that we  
5 had highlighted that is from the residential area to the  
6 east of the project site. It is looking west but also a  
7 little bit northwest.

8 And here you have our proposed view on the  
9 left and our existing view on the right.

10 And, again, this is the intersection of  
11 Cornman Road and South Mammoth Drive. So several of the  
12 residents that spoke last night live on South Mammoth  
13 Drive, which is you can kind of see it to the right of  
14 the frame here.

15 So obviously in this photo you can see our  
16 facility in the midground, and on the left in the  
17 foreground and middle ground, that is the existing 500kV  
18 transmission line.

19 MEMBER GOLD: Mr. Chairman.

20 CHMN STAFFORD: Yes, Member Gold.

21 MEMBER GOLD: Mr. Morgan, could you point  
22 out what the structures are with your laser pointer again  
23 so we know what we're looking at? Not the transmission  
24 lines, the buildings.

25 MR. MORGAN: So here is the switchyard, and

1 forgive me, I'm not a transmission engineer so I'm going  
2 to kind of roughly look at the project components.  
3 Interesting from this angle is you can actually hardly  
4 see the actual exhaust towers.

5                   You can kind of see the tops of them there.  
6 But from this angle it's clear that they're, you know,  
7 shorter than the transmission infrastructure. And this  
8 kind of helps your question from the last time where you  
9 were talking about the water tower being -- I'm sorry --  
10 the tank being 52 feet when the exhaust stacks are 65, so  
11 you can see from this angle they look much closer in  
12 height.

13                   MEMBER KRYDER: Mr. Chairman.

14                   CHMN STAFFORD: Yes, Member Kryder.

15                   MEMBER KRYDER: Question, Mr. Morgan. How  
16 far from this intersection to your nearest building?

17                   MR. MORGAN: Sure. So the distance from  
18 this KOP to the boundary of the project site is  
19 2725 feet.

20                   MEMBER KRYDER: Half a mile.

21                   MR. MORGAN: And it is 4,400 feet from the  
22 turbines.

23                   MEMBER KRYDER: Five-eighths of a mile.  
24 Thank you very much.

25                   MEMBER LITTLE: Mr. Chairman.



1 CHMN STAFFORD: Yes, Member Little.

2 MEMBER LITTLE: I'd just like to make the  
3 observation that I understand that KOPs are chosen the  
4 best way that they can be chosen based on information.  
5 But I believe that perhaps some of the views that were  
6 described by the public last night are more from further  
7 north on this street that goes up to the right here.

8 CHMN STAFFORD: North of Selma.

9 MEMBER LITTLE: Yes. And which would put  
10 the generators themselves as well as -- well, mostly the  
11 generators themselves in the viewshed right in front of  
12 the Flat Top and some of the other mountains that were  
13 described. Just an observation that I have.

14 MR. MORGAN: Noted. And after we go  
15 through these KOPs we can also once again share some of  
16 that live GIS. I think it is helpful to kind of see for  
17 reference at which point the facility would be in the  
18 view of I believe it's Table Top Mountain which is  
19 located southwest of the project, south of Interstate 8.

20 MEMBER LITTLE: That would be wonderful.  
21 Thank you.

22 MR. MORGAN: Great.

23 Any other comments on this KOP?

24 I will move to KOP-3. This is the one from  
25 the Montgomery Road offramp from Interstate 8. And,

1 again, this one is looking -- this one is looking  
2 northwest. So you can see, you know, barren land, vacant  
3 land in the foreground. You can see the existing 500kV  
4 transmission line in the middle ground, and then you see  
5 our facility in the background there.

6 And since we have the numbers, this KOP is  
7 approximately 5,350 feet from the project boundary and  
8 7,800 feet from the turbines.

9 I will continue on to KOP-4. KOP-4 is from  
10 Interstate 8 in the area just southwest of the project.  
11 It is looking northwest -- or I'm sorry -- northeast  
12 towards the project site.

13 And here on your left screen which is  
14 labeled R47 you can see proposed view and on the right  
15 screen which is labeled L47, you can see the existing  
16 view. So once again the existing 500kV line is visible.  
17 However, you can see our structures in the middle ground.

18 Now I'll move on to KOP-5. KOP-5 is from  
19 the agricultural area to the west of the project site  
20 looking east. And once again you can see the existing  
21 500kV line as well as our project components in the  
22 background.

23 And, again, I'll ask if there are any  
24 questions from the Committee, and if not we can also go  
25 ahead and share our live GIS to kind of measure some

1 distance if anyone needs that.

2 MEMBER LITTLE: I'm just curious what -- if  
3 we can take a look at the view from further north of  
4 Cornman in the area, right where that white dot or where  
5 the white hand is, up a little further, yes, in that  
6 area. Toward the project.

7 So the project would be directly now in  
8 between where we're standing if you will on the road and  
9 Flat Top.

10 MR. MORGAN: Just one moment. So I'm  
11 having our GIS kind of show a general reference line,  
12 drawing a line basically from that Table Top Mountain to  
13 the neighborhood so you can kind of see where the cutoff  
14 would be for that view.

15 MEMBER LITTLE: Great. Thank you. So more  
16 through the switchyard structures, then.

17 MR. MORGAN: Yes, and I think it would --  
18 it would be really just the properties that are very far  
19 north in that residential area.

20 MEMBER LITTLE: Right. Right. Okay.  
21 Thank you. That gives me a sense of it.

22 MR. MORGAN: Give us a moment, we're  
23 switching back to the slides here.

24 Now, this is also our -- this is our last  
25 KOP.

1 Are there any additional questions about  
2 these simulations?

3 I think in conclusion, I can say the  
4 project would introduce new structures into the visual  
5 landscape. They would be apparent when viewed from  
6 surrounding viewpoints. They are, however, shorter --  
7 significantly shorter than the existing 500kV line which  
8 is 140 feet. They're denser, but they're fairly similar  
9 in form. So that's kind of my conclusion. Unless  
10 there's any more questions on visual.

11 MEMBER GOLD: Mr. Chairman.

12 CHMN STAFFORD: Yes, Member Gold.

13 MEMBER GOLD: One more question. What  
14 color is everything going to be? Is it going to blend  
15 with the landscape? I mean, you're putting in nice  
16 colors that blend with the landscape. Is that your  
17 intention? I see they're nodding in the background.

18 MR. MORGAN: Yes, I believe a lot of it's  
19 like coated non-metallic so it doesn't shine, things of  
20 that nature, to just kind of make them more blended into  
21 the landscape.

22 MEMBER GOLD: Okay. Thank you.

23 CHMN STAFFORD: More like sort of a desert  
24 tan color, because I noticed the SRP took the exact  
25 opposite approach with their plant up the road, it's like

1 black and gray.

2 MR. MORGAN: Yes, this would blend much  
3 more in with the landscape as you can see here.

4 MEMBER KRYDER: Mr. Chairman.

5 CHMN STAFFORD: Yes, Member Kryder.

6 MEMBER KRYDER: Simply a word of thanks to  
7 you, Mr. Morgan, and whoever put this together. This was  
8 very helpful. Combined with a site visit this morning,  
9 it helped me at least a lot to see the parameters of what  
10 we're dealing with. Thank you.

11 MR. MOYES: Thank you.

12 BY MR. MOYES:

13 Q. Mr. Morgan, also discussed in Exhibit E are  
14 cultural resources. Are you prepared at this time to  
15 discuss your findings on that?

16 A. (Mr. Morgan) Yes, absolutely. Cultural  
17 resources are also discussed in Exhibit E of the  
18 application. A Class I cultural resources report was  
19 prepared to summarize previous surveys and previously  
20 recorded sites within one mile of the project site. A  
21 redacted copy of that Class I cultural resources report  
22 is included in Exhibit E-1 of the application.

23 The Class I found that eight investigations had  
24 been conducted within one mile of the project and  
25 previous linear Class III surveys had been conducted that

1 intersected the project site.

2 As you can see on slide R51 that is the teal  
3 lines coming through the project site there. Five  
4 previously recorded cultural resources are identified  
5 within one mile of the project.

6 Two of those sites are within the project  
7 footprint. However, both of those have been determined  
8 to be ineligible for listing on the National Register of  
9 Historic Places.

10 The applicant would conduct Class III cultural  
11 resource survey of the entire project site prior to  
12 construction, and the results of that survey would be  
13 provided to the State Historic Preservation Office.

14 The applicant would continue to coordinate with  
15 the State Historic Preservation Office on any matters  
16 that pertain to cultural resources. And if any  
17 unanticipated discoveries of cultural resources occur  
18 during the construction or operation of the project, the  
19 applicant will report that discovery to the Arizona state  
20 museum and take all reasonable steps to secure and  
21 maintain the preservation of the discovery as is required  
22 by the relevant Arizona statutes.

23 CHMN STAFFORD: Mr. Moyes, I believe that  
24 the draft proposed CEC you submitted has the language of  
25 the conditions from SHPO?

1 MR. MOYES: That's correct. And we were  
2 informed by them that it's a -- I believe it's two  
3 paragraphs that they've recommended in the most recent  
4 case that the Committee adopt. I don't believe any of  
5 those have been formally finalized by the ACC yet. They  
6 haven't reached that level. But I did see in previous  
7 cases that they were included at least as a  
8 recommendation. So we cited them exactly as was  
9 recommended to us from SHPO.

10 CHMN STAFFORD: All right. Because there  
11 was an e-mail. I guess they responded to the site, they  
12 sent it to you, they copied me, I filed it in the docket.

13 So I think that because I believe that  
14 there was a mistake in the report that stated that the  
15 entire project site had been subject to previous cultural  
16 resources survey. That was not entirely accurate.

17 MR. MOYES: Correct. And Mr. Morgan  
18 testified to that previously that we would be following  
19 recommendation to conduct a Class III survey on the  
20 entire property which would cover anything that the  
21 previous Class I's did not.

22 CHMN STAFFORD: All right. And that, I  
23 believe the condition so that you would get concurrence  
24 from SHPO, State Historic Preservation Office prior to  
25 construction; that's your recollection what the condition

1 would require?

2 MR. MOYES: That's correct.

3 CHMN STAFFORD: All right. Thank you.

4 MEMBER HILL: Mr. Chair, I have a question.

5 CHMN STAFFORD: Please, Member Hill.

6 MEMBER HILL: In my day job I've been doing  
7 quite a bit of -- several conversations with tribes on  
8 renewable energy and transmission deployment.

9 One of the things that I've heard from a  
10 few tribes is that when these surveys occur it would be  
11 nice to have notice or even be invited to attend surveys  
12 that are being conducted. I'm just wondering,  
13 Mr. Morgan, if your company has a habit to do that or  
14 have ever thought to invite tribes along. Because  
15 sometimes tribes just have more knowledge than a general  
16 cultural resource surveyor.

17 MR. MORGAN: Sure. There are times,  
18 especially in the case that you maybe received a response  
19 from a tribe where they identify a specific tribal claim  
20 in your area or maybe there's some sort of resource that  
21 they're aware of that's in the project vicinity where  
22 they might personally request to join a survey.

23 However, we didn't receive any responses  
24 like that in this case. So I'm not sure that's something  
25 that we would necessarily consider here. But it is



1 something that's happened in the past, just as kind of a  
2 continuation of tribal consultant on a project.

3 MEMBER HILL: I just want to follow up and  
4 suggest that given the proximity to the Tohono O'odham  
5 tribal nation of this project, and they're a  
6 well-resourced, fairly sophisticated, you know, their  
7 cultural resource group is pretty talented, that you  
8 might actually want to try and extend that invitation.

9 I think that would be a generous thing.

10 MR. MORGAN: That's noted, and we have --  
11 we have discussed with SHPO that we would continue tribal  
12 consultant through the process. So there will be another  
13 sort of moment throughout our cultural resource process  
14 where they would be notified and consulted, and we keep  
15 that in mind.

16 MEMBER HILL: Okay. Thank you.

17 BY MR. MOYES:

18 Q. Mr. Morgan, I believe you're going to transition  
19 into actually our tribal outreach at this time. Is that  
20 correct?

21 A. (Mr. Morgan) Yes, that was perfect, a perfect  
22 segue. So I know yesterday it had come up at one point  
23 asking specific distances to tribal land, and I did want  
24 to just start with that. So Tohono O'odham is -- their  
25 lands are 2.67 miles to the south of the project. Those

1 are south of Interstate 8. And then Ak-Chin has lands  
2 8.75 miles to the north of the project site.

3 And as far as tribal consultation for the  
4 project, we sent consultation letters to Native American  
5 tribes seeking comment on June 5, 2024. The list of  
6 tribes was obtained using the State Historic Preservation  
7 Offices, government-to-government consultation toolkit  
8 which basically determines tribal claims in the project  
9 area.

10 The consultant letters were all included in  
11 Exhibit E. We did receive one response prior to our  
12 filing of the CEC, and that was included in Exhibit E-2.  
13 And then there were also two additional responses  
14 received after filing of the CEC, which were added to the  
15 record in PCE-11, which was filed prior to the hearing.

16 And just to kind of note the three tribes that  
17 did respond: the Salt River Pima-Maricopa Indian  
18 Community, the Pascua Yaqui, and the White Mountain  
19 Apache.

20 Q. And can you summarize for us briefly what their  
21 responses entailed?

22 A. (Mr. Morgan) Yes. So generally the responses  
23 are a bit of a form letter, but they kind of thank you  
24 for the consultation. And they also agreed with the  
25 recommendations set forth in our Class I. So essentially

1 are agreeing with the same recommendation in the Class I  
2 as well as the recommendation from SHPO which is to  
3 conduct Class III surveys for the project prior to  
4 construction.

5 Q. Thank you. Let's move on now to Exhibit F,  
6 recreational resources.

7 A. (Mr. Morgan) So recreation is discussed in  
8 Exhibit F of the application as Jason stated. Regional  
9 recreation information from the surrounding areas was  
10 gathered from Pinal County from the actual county  
11 government information as well as a desktop review of  
12 aerial imagery and other online information that was  
13 available.

14 We also gleaned some information from the public  
15 process and just discussing people, discussing with  
16 people about some of the lands in the area.

17 Currently there are no existing planned  
18 designated recreational facilities or areas in the  
19 immediate vicinity of the project.

20 There are no recreational plans on the state  
21 lands or BLM lands with one mile of the project either.

22 The nearest recreational facility is Desert  
23 Springs Ranch, which is an R.V. resort and golf community  
24 about one mile northeast of the project. There's another  
25 RV park, which is Rovers Roost, which is across the same

1 intersection from Desert Springs.

2           And throughout the public process we've also  
3 been told that Greene Wash and some of the adjacent state  
4 land which you can see in blue to the southeast of the  
5 project is -- can be used for walking, biking,  
6 off-roading and other activities.

7           I think on the route tour you may have seen  
8 there were kind of dirt biking trails made legally or  
9 illegally, not sure, but there clearly are some lands  
10 used for that type of recreation in the vicinity.

11           However, the project would not preclude any  
12 recreational uses in the vicinity of the project site,  
13 and there are no recreational impacts anticipated to  
14 result from Project Bella.

15           Q.    Thank you, Mr. Morgan.  Absent any questions  
16 from the Committee on that, let's move on to the existing  
17 plans in the area.  Can you describe those for us?

18           A.    (Mr. Morgan)  Yes.  Existing plans are described  
19 in Exhibit H of the application.  There are no major  
20 development plans within one thousand feet of the  
21 proposed project.  The closest planned area development  
22 is Merado Hills, which is located just one mile outside  
23 of the buffer to the east.

24           That was a residential development and it's  
25 unclear whether it will ever be built.  I think it

1 actually had some permits denied at some point, but it  
2 still shows in the county data.

3 The other PAD in the project vicinity -- sorry,  
4 PAD, planned area development -- is the Attesa Motor  
5 Sports Complex, which is the racetrack to the southeast  
6 which you heard about yesterday evening, and I've  
7 mentioned in some of my previous testimony. So you can  
8 see that in the bottom right corner of the figure, and it  
9 is just outside of that one-mile boundary.

10 I also wanted to note that the preferred route  
11 for the Interstate 11 development is along Montgomery  
12 Road. That is that black dotted line to the east of the  
13 project. Obviously that's a complicated transportation  
14 project, so it's very unclear what the time line of that  
15 would be because it's a Federal Highway Administration  
16 project with a very complicated NEPA permitting process.

17 CHMN STAFFORD: So they're going to turn  
18 that Montgomery Road into a federal highway?

19 MR. MORGAN: That is their preferred route  
20 in their current NEPA documentation.

21 CHMN STAFFORD: Where's this highway going?

22 MEMBER MERCER: Mr. Chairman.

23 CHMN STAFFORD: Yes.

24 MEMBER MERCER: That highway comes through  
25 Tucson, actually.

1 CHMN STAFFORD: Okay.

2 MEMBER MERCER: Picture Rocks.

3 CHMN STAFFORD: It goes -- how far north  
4 does it go? All the way up to the --

5 MEMBER RICHINS: Chairman, it's the I-11  
6 corridor, isn't it?

7 MR. MORGAN: Correct.

8 MEMBER MERCER: I believe it connects to  
9 the 303.

10 CHMN STAFFORD: Okay.

11 MEMBER HILL: Las Vegas.

12 MEMBER MERCER: Something like that.  
13 Las Vegas.

14 CHMN STAFFORD: It goes to Vegas. Okay.  
15 All right.

16 MR. MORGAN: So in conclusion on existing  
17 plans, there are no planned local, state or federal  
18 developments that would conflict with the proposed  
19 project. Therefore the project components are consistent  
20 with existing and planned local plans in the area.

21 BY MR. MOYES:

22 Q. Mr. Sohm, are you prepared at this time to  
23 discuss noise analysis for the project for us?

24 A. (Mr. Sohm) Yes, Mr. Moyes.

25 Q. Okay. Would you please provide for the

1 Committee an overview of the existing regulations  
2 governing sound for Pinal County and then go into more  
3 detail on the specific analysis that you or your company  
4 performed for this project?

5 A. (Mr. Sohm) Certainly. So one of the aspects  
6 that we look at when we do a noise impact assessment is  
7 to determine what standards, ordinances, thresholds would  
8 apply to the project.

9 And in this case, based on our review, Pinal  
10 County has an excessive noise ordinance, very detailed.  
11 It has various discrete, specific thresholds based on the  
12 land zoning. And as we kind of talked about previously,  
13 there's two zoning characteristics surrounding this  
14 project. We have the general rural as well as a  
15 residential zoning. The project itself is general rural  
16 currently.

17 Those noise limits in that ordinance are  
18 presented in our technical report within table -- just  
19 give me a moment -- within Table 8. I can cover those if  
20 the Committee is interested on what those thresholds are.

21 However, I would note that a particular  
22 condition of this Pinal County ordinance actually has an  
23 exemption that applies to normal power generation  
24 operations.

25 MEMBER GOLD: Mr. Chairman.

1 CHMN STAFFORD: Yes, Member Gold.

2 MEMBER GOLD: Would I ask Mr. Sohm to put  
3 that up on the screen so we can look at it?

4 MR. SOHM: We don't have the Table 8. It's  
5 directly out of the report unless we can pull that up  
6 from the technical report.

7 MEMBER KRYDER: Mr. Chairman.

8 CHMN STAFFORD: Yes, Member Kryder.

9 MEMBER KRYDER: Mr. Sohm, when you said  
10 there is an exemption, it is a complete exemption,  
11 partial? How does that work? I didn't want to pass over  
12 that. That's a big word.

13 MR. SOHM: Correct. I don't have the exact  
14 wording here, but it states, I'm paraphrasing, power  
15 plant equipment during normal operation is exempt from  
16 those limits. However, I will also add that we did use  
17 those thresholds in our analysis and were able to  
18 demonstrate that it would comply with all those  
19 requirements if they did.

20 MEMBER KRYDER: So for the record, then,  
21 you're not required to, but your projections are that you  
22 would be within the range of the Pinal County noise  
23 limitations?

24 MR. SOHM: Correct.

25 MEMBER KRYDER: Thank you.



1 MR. SOHM: The other thing that we look at  
2 is EPA guidance value. That guidance value was developed  
3 in the '70s. It's used for other federal projects,  
4 specifically FERC, Federal Energy Regulatory Commission  
5 uses this. It's an -- I'm going to use some acronyms  
6 here, but it's a 55 LDN, a day-night equivalent value.  
7 We've also used that guidance value to analyze project  
8 impacts. That value is established as a guidance value  
9 that was developed to ensure there are no harmful impacts  
10 to humans and/or annoyance to humans.

11 MEMBER GOLD: Mr. Chairman.

12 CHMN STAFFORD: Yes, Member Gold.

13 MEMBER GOLD: So I'm looking at your chart,  
14 and you have I believe those are decibels. 51.1, 48.8,  
15 39.8. Is that accurate?

16 CHMN STAFFORD: What chart are you looking  
17 at?

18 MR. SOHM: What chart, please?

19 MEMBER GOLD: Looking at R58, Project Bella  
20 Noise Impact.

21 MR. SOHM: These are the old slides. Is  
22 this the slide you're referring to?

23 MEMBER GOLD: That is the slide I'm  
24 referring to.

25 MR. SOHM: Could you repeat your question,

1 please?

2 MEMBER GOLD: So I'm guessing those are  
3 decibel ratings at each of your rectangles.

4 MR. SOHM: Correct. Those are A-weighted  
5 decibels.

6 MEMBER GOLD: Okay. And could you put your  
7 other chart that's on page R56 on the other screen so we  
8 could look at both at the same time, please?

9 CHMN STAFFORD: I think you mean R57.

10 MEMBER GOLD: R57. I'm sorry. We have  
11 both charts up there and I'm looking at the sounds that  
12 you're describing.

13 MR. SOHM: Yes.

14 MEMBER GOLD: Now, what do you base those  
15 measurements on? No, not the ones on the left. The one  
16 on the right. You're saying that at this distance at  
17 this location you're hearing 39, 40 decibels right now?

18 CHMN STAFFORD: Or is that with all units  
19 operating?

20 MEMBER GOLD: Yeah, what do those numbers  
21 stand for?

22 MR. SOHM: Sure, so the units of those  
23 numbers are the A-weighted decibel DBA, and what's  
24 represented by those boxes is that's the project only  
25 impact, and that was developed using the very

1 conservative I'll call it worst-case conditions.

2 All 10 of the LM6000s were at their maximum  
3 load. It also includes the ancillary equipment in terms  
4 of on-site transformers, and it also includes the noise  
5 that would be generated from the battery energy storage  
6 systems as well.

7 MEMBER GOLD: So you used your sound meter  
8 at those locations, and did some kind of sound generation  
9 at that central point where your plant is going to be to  
10 measure those sounds? Is that accurate?

11 MR. SOHM: No. They're not measured.  
12 They're predictive, we use a sophisticated refined model  
13 to do that.

14 MEMBER GOLD: That's what scares me, those  
15 sophisticated refined models. I'm going to ask you to do  
16 something with the Chairman's permission.

17 CHMN STAFFORD: Yes.

18 MEMBER GOLD: I have a decibel meter, may  
19 not be professional but at least it's a decibel meter,  
20 and if I turn it on now, without speaking, the ambient  
21 sound in this room is about 40 decibels. Would you  
22 agree?

23 MR. SOHM: I can't speak to the validity of  
24 the app, but in terms of --

25 MEMBER GOLD: Experience.

1 MR. SOHM: -- experience and in terms of  
2 reference representative sound levels I would say,  
3 Table 1 of our technical report has a reference point  
4 there. A library is considered similar to a 40 DBA.

5 MEMBER GOLD: So --

6 MR. SOHM: Without anybody talking, I  
7 mean --

8 MEMBER GOLD: And that's what I'm about --  
9 what I'm reading right now. Could I ask somebody to turn  
10 on that fan.

11 CHMN STAFFORD: Turn it on for  
12 approximately five seconds, and turn it right back off  
13 because the court reporter can't hear anything while it's  
14 going on.

15 (Fan was turned on and turned off.)

16 MEMBER GOLD: That was approximately  
17 60 decibels. Now your chart says 60 decibels is a  
18 chatter, and the court reporter can hear us chatting.  
19 But with that fan on, I don't think you could have heard  
20 us talking. So I'm questioning -- I'm questioning why is  
21 60 decibels a chat there, but if we turn 60 decibels on  
22 with that fan I mean right now --

23 CHMN STAFFORD: I think, yeah, you're  
24 right. 60-decibels chat sounded more like 70, like a  
25 vacuum cleaner.

1 MR. SOHM: And I would like to add this  
2 reference here. I have a table from our report that I  
3 think is more representative and more defensible. I did  
4 not prepare this slide, I will say. I can speak to it.

5 But I would say the important piece that I  
6 don't like about this reference here that is a little bit  
7 misleading is when we talk about A-weighted decibels,  
8 distance matters.

9 And so if we talk about just any of these  
10 particular events, the reference distance is very  
11 important in terms of how loud that event would be. And  
12 so when we talk about a chat, what they're really talking  
13 about is having a conversation within that three-foot  
14 distance is generally the reference material.

15 And so, again, it's different frequency. I  
16 don't know if that app, if it's valid but, you know, the  
17 industry standard I would say is 60 is a normal  
18 conversation at about three feet.

19 MEMBER GOLD: Now, right now I'm getting  
20 our conversation at about 50 decibels.

21 MR. SOHM: I would say there's probably a  
22 microphone involved as well.

23 MEMBER GOLD: I'm sure it is. I'm sure it  
24 is. The point I'm trying to make now is I've been at  
25 rocket launches, at 140 decibels the ground shakes and

1 you can be a mile away and the ground shakes.

2 A helicopter flying overhead, reasonable  
3 height, is 100 decibels. And that'll keep you up at  
4 night. You're not going to sleep through that.

5 I don't know why a vacuum cleaner is 70  
6 decibels and the hair dryer is 90 decibels, unless you  
7 keep the hair dryer right next to your head and the  
8 vacuum cleaner is on the floor.

9 What I'm concerned about is the sound of  
10 that fan relative to the sound of your generators. And  
11 the people living within a mile of that sound and your  
12 generators are going to be on at night. Which is the  
13 reason I'm concerned about the sound.

14 Now, distance reduces sound. Barriers  
15 reduce sound. I'm sure if somebody's on one side of your  
16 water tower and somebody's on the opposite side with your  
17 generator in the middle, the people behind the water  
18 tower are going to hear less noise.

19 What are you planning on doing to keep the  
20 sound down so the people who live within a mile of that  
21 area can sleep at night? I mean, this seems to be a  
22 legitimate concern because how much are your -- what's  
23 the sound level coming out of your stacks? What's the  
24 sound level coming out of your machinery? What is the  
25 decibel level if you're standing next to them? And what

1 is it a mile away? Where do I see that?

2 MR. SOHM: That was a lot. I can try to  
3 unpack that piece by piece. But I guess, let me start by  
4 saying the model that we use is very sophisticated. It  
5 is run in accordance with what they call the ISO 9613-2  
6 standards. It's an international standard organization  
7 of engineering calculations for the propagation of  
8 outdoor noise. So it's a very sophisticated and peer  
9 reviewed methodology. The model uses those same  
10 methodologies.

11 Things that go into the model in addition  
12 to the placement of the equipment is their sound power  
13 levels with the full frequency spectrum. That's provided  
14 as Table 11 within our technical report. And it shows  
15 the quantities of the equipment and those sound power  
16 levels across the full frequency spectrum.

17 The other things that goes into the model  
18 is we place it in the real place in the world, I will  
19 say. So it's got the topography features, it's got the  
20 ground cover features in terms of, you know, hard  
21 surfaces that are reflective, like I would say the  
22 cooling pond water. Those are highly reflective and  
23 we've modeled those as such in the model. Other areas  
24 with disturbed surfaces would be softer surfaces and you  
25 would get some attenuation from those types of ground

1 cover.

2 The model also accounts for meteorological  
3 the conditions. That also impacts the noise attenuation  
4 rate. It also accounts for intervening structures and  
5 reflective surfaces.

6 So part of the -- when we put this  
7 information in a part of the design, that was all  
8 considered and you can see some of those mitigation if  
9 you will, or attenuation from how those intervening  
10 structures have been placed in relation to the project  
11 boundary and those sensitive receptors.

12 Your other questions, I'm sorry, you're  
13 going to have to --

14 MEMBER GOLD: Well, let me, Mr. Chairman.

15 CHMN STAFFORD: Yes, Member Gold.

16 MEMBER GOLD: Let me make this simpler.

17 MR. SOHM: Okay.

18 MEMBER GOLD: What is the decibel level if  
19 you're standing right next to your LM6000s?

20 MR. SOHM: Sure. I can reference the sound  
21 power level, and so that's not dependent on distance but  
22 essentially it's the sound emanating directly from the  
23 piece of equipment.

24 MEMBER GOLD: Yes. What is the decibel  
25 rating.



1 MR. SOHM: And there's a couple different  
2 components of that that contribute to the noise along  
3 with the turbine, but if we're going from exhaust itself,  
4 that is represented by our model at 94 DBA.

5 MEMBER GOLD: So the top of the stack is  
6 going to be 94 decibels.

7 MR. SOHM: Correct.

8 MEMBER GOLD: Okay. How about if you're  
9 standing right next to it, right next to the generator  
10 itself?

11 CHMN STAFFORD: On the ground outside  
12 the --

13 MEMBER GOLD: On the -- yes.

14 CHMN STAFFORD: Okay.

15 MEMBER GOLD: On the ground right there  
16 standing next to the generator. What is that noise  
17 level?

18 MR. SOHM: I'd say that that probably would  
19 be best represented by either the turbine enclosure or  
20 the turbine base, and that would be about 95 to  
21 96 decibels on a sound power basis.

22 MEMBER GOLD: All right. So you're saying  
23 that if you're standing right next to it, I'm going to  
24 guess that would be the center of your circle there. See  
25 the circle on the screen?

1 MR. SOHM: I do, but we can use that as  
2 reference point. Sure.

3 MEMBER GOLD: Is that where you would have  
4 your turbines roughly? Let's say the turbines were right  
5 at that center.

6 MR. SOHM: If we go to the next -- I don't  
7 know if these slides have the isopleth, but you can see  
8 the sound emanating on other slide deck that I think was  
9 provided.

10 MEMBER GOLD: I'm looking at the next slide  
11 and I see that you have a big blue square. What does  
12 that represent? There's no key to tell me. I'm assuming  
13 that's where your generators are.

14 CHMN STAFFORD: Yeah. You're talking about  
15 slide R59?

16 MEMBER GOLD: Yes.

17 CHMN STAFFORD: Okay.

18 MEMBER GOLD: So let's assume that your  
19 generators are just right there. Now you go back to the  
20 previous slide, and if I'm looking at distances  
21 correctly, we're going from 95 decibels to 50 decibels in  
22 a quarter of a mile, and then I'm going from 50 decibels  
23 to 42 decibels in a half a mile, if you look to the  
24 right.

25 So what I'm seeing is it doesn't -- it

1 doesn't seem correct. How do you go from 90 decibels,  
2 95 decibels to 54 decibels at a quarter of a mile and  
3 then when you just go a half a mile later it only goes  
4 down 10 decibels.

5 MR. SOHM: And I can answer that. It's  
6 because noise is a logarithmic scale.

7 MEMBER GOLD: Ah ha.

8 MR. SOHM: So it's not linear, and I guess  
9 the best way I can put that into perspective is, you  
10 know, if you look at two similar noise sources, let's say  
11 a car, maybe it's not the best example, but say it's 50  
12 DBA idling there. You have a second car that you add  
13 right next to it, that total sound level is not 100.  
14 It's 53. It increases by three DBA because of the  
15 logarithmic nature of sound.

16 MEMBER GOLD: Gotcha.

17 CHMN STAFFORD: Does that mean diminishing  
18 marginal returns?

19 MR. SOHM: Exactly. So as you get further  
20 away from the sound level, further and further and  
21 further, it takes longer distances to achieve the same  
22 reduction.

23 MEMBER GOLD: Now, is these sounds without  
24 your sound-deadening equipment or with equipment on or  
25 with the equipment off?

1 MR. SOHM: That particular figure, slide, I  
2 can't really read it, R58, that was with all 10 turbines  
3 operating simultaneously at 100 percent load with the  
4 BESS, the battery energy storage system units discharging  
5 and being cooled, and the transformers on site also  
6 making noise.

7 MEMBER GOLD: With your sound-deadening  
8 equipment operational?

9 MR. SOHM: Correct, yeah. That includes  
10 the exhaust work that Garen mentioned yesterday, the  
11 baffles and the silencer. It also accounts for those  
12 intervening structures that, you know, in terms of how  
13 the buildings and equipment have been placed on the site.

14 MEMBER GOLD: Okay. So according to this,  
15 the people who live at the houses close to that road to  
16 the south, you know, within a half a mile of your plant  
17 I'm guessing is the distance.

18 MR. SOHM: I'd have to -- I'm sorry. The  
19 residents that I'm aware of that we analyzed were to the  
20 northwest and to the east. I don't think there was --

21 MEMBER GOLD: The residents to the  
22 northwest and the east would have the equivalent sounds  
23 of 40 decibels according -- well, 40 decibels to the east  
24 and 50 decibels to the northwest; is that correct,  
25 according to your chart?

1 MR. SOHM: I guess I'd have to look at it a  
2 little more carefully. Based on my numbers and what I've  
3 looked, the property boundary would have noise levels in  
4 the 50 to mid-50 range that you're referencing. The  
5 residents that are further to the east there on the edge  
6 of the figure, that would be most represented by NSA 3,  
7 as we called it in our report, and that was in the low-  
8 to mid-40s.

9 MEMBER GOLD: So the low- to mid-40s is  
10 obviously not a quiet library. That chart is no good  
11 either because low to mid-40s is what we're talking now,  
12 and we're not talking at a quiet library.

13 Normal conversation is 60 decibels. So  
14 you're saying that your equipment will -- quiet  
15 libraries, roughly no noise.

16 MR. SOHM: Correct.

17 MEMBER GOLD: So you're going to say the  
18 people who live in these homes will not hear any noise at  
19 night.

20 MR. SOHM: I'm not saying they're not going  
21 to hear any noise because we also have to look at the  
22 background levels which are quite low for this rural  
23 area.

24 MEMBER GOLD: So when trucks go by on I-8,  
25 they'll be louder than your sounds?

1 MR. SOHM: Depending on the distance, yes.

2 MEMBER GOLD: Okay. We're at 40 decibels  
3 now, roughly, and I'm asking the people in the background  
4 who don't have to say anything because we're not going to  
5 be on the record, are you about 40 decibels on your  
6 charts? Okay. So 40 decibels is this quiet room. They  
7 should be able to sleep with 40 decibels.

8 MR. SOHM: I would agree with that because  
9 the project we evaluated at those nearby residences and  
10 calculated and modeled this projected noise including the  
11 current background levels, and we're showing and  
12 demonstrating that those levels are less than the EPA  
13 guidance value that would be protective of human  
14 annoyance.

15 MEMBER GOLD: So it sounds like you did  
16 your due diligence and you're doing everything in your  
17 power to keep the noise level down so you're not going  
18 to, oh heck, destroy their property values and keep them  
19 awake at night.

20 MR. SOHM: Correct. And the other thing I  
21 would add is the measurements that, or the -- sorry --  
22 the predicted values that we're representing here, those  
23 are at outside. Obviously it would be less inside, you  
24 know, a structure such as a home.

25 MEMBER GOLD: Okay.

1 MR. SOHM: And I also would say that  
2 obviously it would be much less if windows and doors were  
3 closed. But even if windows and doors are open during  
4 nice times of the year, it still would be less than what  
5 we're representing here. There is some attenuation from  
6 the structure itself.

7 MEMBER GOLD: Assuming, you're under oath  
8 so I'm guessing all this stuff is accurate.

9 MR. SOHM: Yes, to the best of my  
10 knowledge, yes.

11 MEMBER GOLD: Do you have any guarantees or  
12 something that you could say to the homeowners that we  
13 guarantee this will be the case? And if it's not the  
14 case, we will do something to mitigate it for your homes?

15 I'm assuming it's never going to be  
16 necessary because you're doing everything that's right.  
17 But just so that they feel confident, if we say this  
18 project is okay to go, that they will feel confident that  
19 we did our due diligence and you are doing your due  
20 diligence to do the best for the people, not keep them  
21 awake at night or ruin their property values. Is that a  
22 possibility?

23 MR. SOHM: What I am comfortable saying in  
24 my expert opinion is that based on our conservative model  
25 I am confident that the noise levels will comply with the

1 Pinal County noise ordinance.

2 MEMBER GOLD: Mr. Chairman, is that  
3 something that we could make sure that that's part of our  
4 plan and say that the 40 decibels means they would have a  
5 room as quiet as a library?

6 CHMN STAFFORD: Well, we could certainly --  
7 when we get to the CEC we can talk about potential  
8 conditions that could be -- I know the standard condition  
9 we have for them to monitor interference with radio and  
10 television signals and then keep records of complaints  
11 for five years and follow up.

12 I think we could probably craft some  
13 language that would take the same approach with, you  
14 know, noise complaints. But, again, I mean, it would  
15 be -- it would have to be a condition of the CEC because  
16 while they're engaging this to comply with the Pinal  
17 County noise ordinance, they don't have to because there  
18 is a specific exception that exempts utility plants,  
19 power plants.

20 MEMBER GOLD: That sounds like a catch-22,  
21 Mr. Chairman.

22 CHMN STAFFORD: Well, that's what I'm  
23 saying. They're voluntarily complying with the Pinal  
24 County noise ordinance because there's -- they don't have  
25 to because it's a specific exception that's for power



1 plants.

2 MEMBER GOLD: Oh, okay. Now I understand  
3 that.

4 CHMN STAFFORD: But if we have a condition  
5 in the CEC then they would have to monitor and comply  
6 with that.

7 MEMBER GOLD: And since they're already  
8 stating that's their intention to keep the sound down,  
9 that sounds fine. Okay, Mr. Chairman, that answers my  
10 concerns.

11 CHMN STAFFORD: All right. Well, we're  
12 coming up on five p.m. I think we have probably a few  
13 more questions for these witnesses, but tomorrow I think  
14 the plan is to bring on the first panel as kind of a --  
15 maybe even some members of this panel to do sort of a bat  
16 cleanup, Mr. Moyes?

17 MR. MOYES: Yes, we would prefer with your  
18 permission to finish the environmental aspect of panel 2,  
19 finishing up with sound and any remaining questions there  
20 may be for sound, continuing on to our public outreach  
21 explanation. And then bring back panel 1 for all of  
22 those technical follow-ups that were asked.

23 CHMN STAFFORD: All right. That will work.  
24 We have several members of the public that have been  
25 attending, so I think what we'll do is when we come back

1 tomorrow morning at nine we can take additional public  
2 comment and then proceed with your direct case and then  
3 conclude your direct case and then move on to -- I guess  
4 it's not really a rebuttal case, but it kind of resembles  
5 one because it's just kind of follow-up questions from  
6 the Committee.

7 MR. MOYES: Yes, that works for us,  
8 Mr. Chairman.

9 CHMN STAFFORD: All right. Well, we will  
10 return tomorrow morning at nine a.m.

11 We stand in recess.

12 (Proceedings recessed at 4:55 p.m.)

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