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1 BE IT REMEMBERED that the above-entitled and  
2 numbered matter came on to be heard before the Arizona  
3 Power Plant and Transmission Line Siting Committee, at  
4 the Comfort Suites Goodyear, 15575 West Roosevelt Road,  
5 Goodyear, Arizona, commencing at 1:03 p.m. on the 24th  
6 of September, 2019.

7

8

BEFORE: THOMAS K. CHENAL, Chairman

9

10 LAURIE A. WOODALL, Arizona Corporation  
Commission  
11 LEONARD C. DRAGO, Department of Environmental  
Quality  
12 JOHN R. RIGGINS, Arizona Department of Water  
Resources  
13 MARY HAMWAY, Incorporated Cities and Towns  
JIM PALMER, Agricultural Interests  
14 PATRICIA NOLAND, General Public  
JACK HAENICHEN, General Public  
15 KARL GENTLES, General Public

16

17 APPEARANCES:

18 For the Applicant:

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22 and

23 PINNACLE WEST CAPITAL CORPORATION  
Law Department  
24 By Ms. Linda Benally, Senior Attorney  
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1 APPEARANCES:

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4 Staff Attorney, Legal Division  
5 1200 West Washington Street  
6 Phoenix, Arizona 85007

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1 CHMN. CHENAL: All right. Good afternoon,  
2 everyone. My name is Tom Chenal. I chair the Line  
3 Siting Committee.

4 This is the time set for the hearing to begin on  
5 the application of Arizona Public Service Company for a  
6 certificate of environmental compatibility authorizing  
7 the Wildcat and Cyclone transmission line project and  
8 other facilities.

9 May we have appearances, please, starting with  
10 the applicant, Mr. Derstine or Ms. Benally.

11 MS. BENALLY: Good afternoon, Chair Chenal,  
12 Committee members. Linda Benally, in-house counsel at  
13 APS, along with Matt Derstine from Snell & Wilmer  
14 representing the company.

15 CHMN. CHENAL: All right. Thank you very much.  
16 And then, Mr. Emedi.

17 MR. EMEDI: Stephen Emedi on behalf of the  
18 Arizona Corporation Commission.

19 CHMN. CHENAL: Very good.

20 Let's have a roll call of the members of the  
21 Commission, starting with Member Noland this time.

22 MEMBER NOLAND: Patricia Noland representing the  
23 public.

24 MEMBER HAENICHEN: Jack Haenichen, also  
25 representing the public.

1 MEMBER GENTLES: Karl Gentles, representing the  
2 public.

3 MEMBER WOODALL: Laurie Woodall, representing  
4 the Chairman of the Arizona Corporation Commission,  
5 Robert Burns.

6 MEMBER HAMWAY: Mary Hamway, representing cities  
7 and towns.

8 MEMBER PALMER: Jim Palmer, representing  
9 agriculture.

10 MEMBER DRAGO: Len Drago, representing the  
11 Arizona Department of Environmental Quality.

12 MEMBER RIGGINS: John Riggins, director designee  
13 for the Arizona Department of Water Resources.

14 CHMN. CHENAL: All right. Thank you very much.

15 So a standard admonition that we always give at  
16 the beginning of the hearings is to please ask --  
17 obviously, the applicant and the intervenor will address  
18 that in a moment -- understand that we as a Committee  
19 cannot speak with the public or with any of the  
20 applicants or parties about any of the matters, you  
21 know, before the Committee, other than in the context of  
22 the hearing.

23 So if you come up and talk to one us, we will  
24 certainly talk to you about the weather, about how lousy  
25 the Cardinals are, but we can't talk to you about the

1 application or anything relating to the application. So  
2 I just want to advise you of that. It is not a -- don't  
3 take it personally, but, you know, that's just, that's a  
4 serious violation. So we can't do that.

5 First order of business is the notice of  
6 intervention on behalf of Arizona Corporation Commission  
7 filed by Mr. Emedi on behalf of the Commission. That  
8 notice of intervention is intervention by right under  
9 our statute. So the Corporation Commission is an  
10 intervenor in this action, and will have the rights of  
11 any other party to examine witnesses, cross-examine,  
12 make argument, opening statements, closing, you know,  
13 statements as you wish, Mr. Emedi.

14 MR. EMEDI: Thank you, Chairman.

15 CHMN. CHENAL: We will have public comment  
16 tonight -- better check what time -- 5:30. We were at  
17 6:00 at the hearing we had last week in Flagstaff. So  
18 5:30 this evening we will have public comment in case  
19 anyone was interested in speaking tonight to the  
20 Committee.

21 But we are very flexible in taking public  
22 comment from interested citizens and elected officials  
23 during the course of the proceedings. So we work people  
24 in to, you know, accommodate their schedule. If they  
25 think highly enough to give comment, we want to hear it.

1 And so we will hear them whenever we can, after a break,  
2 before, you know, before we begin a session, whatever.

3 I don't believe, based on the meetings we had,  
4 the prefiling meeting and the preconference hearing we  
5 held, that there is any issue regarding disclosure of  
6 exhibits or witness summaries or anything like that  
7 between the intervenor and the applicant. I am  
8 hearing -- I am seeing a no shake of the head, for the  
9 record.

10 MR. EMEDI: Yeah, thank you, Mr. Chairman.  
11 There is no issues from the Commission's perspective.

12 CHMN. CHENAL: And from the applicant's  
13 perspective.

14 MS. BENALLY: There are no issues, Chair.

15 CHMN. CHENAL: Okay. Very good.

16 I have not received any limited appearance  
17 statements, which is another way that citizens, persons,  
18 can provide comment about a particular application by  
19 statute. They can provide written statement. I have  
20 not seen any from anybody, and I don't think the docket  
21 reflects any were filed. So we will take public comment  
22 as I indicated, but I don't have any limited appearance  
23 statements.

24 Is there any -- before we begin the opening  
25 statements -- and I will start with the applicant, and

1 then Mr. Emedi on behalf of the intervenor -- does the  
2 Committee have any questions?

3 Yes, Member Woodall.

4 MEMBER WOODALL: I had a question, and that is  
5 whether or not the costs for the project that are  
6 reflected in the application include the substation  
7 costs. And I would appreciate it if that could be  
8 addressed during the presentation of whatever witness.

9 Also, on page B-3 of the application, there is a  
10 reference to a small communications facility. And I  
11 would be interested in knowing exactly what that is.  
12 Thank you.

13 MR. DERSTINE: Mr. Chairman, Member Woodall, I  
14 will just address your first question up front. We will  
15 cover costs in the case presentation, but to let you  
16 know up front, the costs that are set forth in the  
17 application and that will be covered by Mr. Larsen are  
18 just for the transmission facilities. The application  
19 covers the transmission facilities.

20 We will talk about and show you where the  
21 substations are located, but as we have done in other  
22 cases, the application itself is not asking for coverage  
23 for the substations. They are being sited through --  
24 well, the one property is zoned industrial. They are  
25 having their Goodyear permitting process. And so the

1 application does not include the substations, per se,  
2 but we will talk about them.

3 MEMBER WOODALL: Okay. And so the definition of  
4 transmission lines does not include substations?

5 MR. DERSTINE: That's right.

6 MEMBER WOODALL: Okay. Thank you very much.

7 CHMN. CHENAL: All right. Any procedural  
8 matters that -- I am asking the applicant and the  
9 intervenor if there are any procedural matters that we  
10 should discuss prior to the opening statement. I am not  
11 seeing any.

12 Just in terms of -- I should address one thing.  
13 In terms of the length of this hearing, I mean we have  
14 talked about it, I think we are expecting that we will  
15 make progress today. Tomorrow morning we will have a  
16 tour; it won't be quite as lengthy as some other tours  
17 we have taken. We will take some more testimony  
18 tomorrow. I think we will work our way into Thursday,  
19 as I have indicated before. I just think we operate a  
20 little better if we are getting towards the end of an  
21 afternoon to, you know, start fresh the next morning and  
22 start with the deliberations for the CEC.

23 So depending on when we complete tomorrow,  
24 assuming we do, maybe we will take a break then and  
25 start with the deliberations on Thursday. We may not

1 finish tomorrow and we will go into Thursday. Then we  
2 will complete the process Thursday, unless there is any  
3 unexpected matters that I am unaware, but based on the  
4 conversations and meetings we have had, I think we  
5 anticipated this will finish up Thursday.

6 As I indicated, there will be a tour tomorrow.  
7 We will talk about that later. I know that's part of  
8 your presentation.

9 So unless there is anything further, maybe we  
10 should now begin with the opening statement of the  
11 applicant. And I don't know who is going to be doing  
12 that, Ms. Benally, if it is going to be you, or if it is  
13 going to be Mr. Derstine.

14 MS. BENALLY: Mr. Derstine will do the opening  
15 for APS.

16 CHMN. CHENAL: All right. Thank you very much.

17 MR. DERSTINE: Just make sure I am driving my  
18 laser pointer the right direction here. Got it.

19 Well, good afternoon, Mr. Chairman, members of  
20 the Committee. I know you were in Flagstaff last week  
21 for a case, and we appreciate you coming back to Phoenix  
22 and being here today to hear our case on a fairly short  
23 turnover. So thank you.

24 This is the first transmission line siting case  
25 that Arizona Public Service Company has had before the

1 Committee for a couple years. But it is certainly not  
2 new to the process. The history of APS dates back to, I  
3 want to say, 1886, something like that, where the  
4 Phoenix Illuminating Gas and Electric Company lit the  
5 first lights on Washington and Center Street in downtown  
6 Phoenix. Center Street is now Central Avenue. This  
7 photo is from that time frame; although, it is not  
8 Washington and Center. But you can see the utility  
9 poles there and the horse-drawn street trolleys.

10 Today APS is Arizona's largest electric utility.  
11 It has more than 34,000 miles of transmission lines. It  
12 serves 11 of Arizona's 15 counties and has somewhere  
13 around 1.2 million retail and wholesale customers.

14 Among the areas that APS serves include the  
15 metropolitan Phoenix area. APS's service territory is  
16 shown on this map in white, and non-APS served areas are  
17 in the darker shaded portions of that metro Phoenix map.

18 What you see from the map is that APS serves  
19 much of the west valley of Phoenix, and including the  
20 City of Goodyear where we are today. Much of the west  
21 valley, the history of the west valley was largely  
22 farmland. And there is fair amounts of farmland still  
23 here today. But in fact the City of Goodyear gets its  
24 name from its farming history.

25 In 1917, the Goodyear Tire and Rubber Company

1 set out a junior executive by the name of Paul  
2 Litchfield to Arizona to acquire land to grow cotton.  
3 Goodyear was using a long-strand cotton fiber in  
4 producing its tires at the time, and it came to Arizona  
5 and planted hundreds of acres of cotton fields so it had  
6 a reliable supply of cotton for those tires.

7 So the community that grew up around those  
8 Goodyear cotton farm became the Town of Goodyear and now  
9 the City of Goodyear. And Litchfield Park, named after  
10 Paul Litchfield, was the corporate headquarters for the  
11 Goodyear farms.

12 So it goes without saying that a lot has changed  
13 since the early 1900s, and maybe nothing exemplifies  
14 that more than the fact that the west valley, which  
15 attracted the Goodyear Tire and Rubber Company in the  
16 early 1900s to come here and grow cotton to make tires,  
17 is now attracting companies like Microsoft to come here  
18 and build data centers.

19 I missed my Goodyear farm slide there. There it  
20 is.

21 It might be an interesting aside to know that  
22 the community which became known as Goodyear was  
23 originally called, named Egypt, because the cotton that  
24 was planted here was the same type that was grown in  
25 Egypt. And the supply from Egyptian cotton got tied

1 during World War I, and so they came here to source it  
2 and grow it themselves.

3 So cotton farming to data centers. In 2018  
4 Microsoft announced that it acquired approximately 274  
5 acres of land to build a large data center, this site  
6 right here in yellow on the screen to the left. And not  
7 long after, Stream Data Centers announced that it had  
8 acquired around 175 acres of land to build its own data  
9 center, and the data center is shown on the map here  
10 shaded in blue.

11 These aren't the only two data centers that are  
12 moving to the valley. Vantage Data Centers announced it  
13 has acquired 50 acres in Goodyear. Compass Data Centers  
14 has announced it as acquired 200 acres in Goodyear. And  
15 Microsoft has purchased two additional sites to  
16 construct data centers, one in Goodyear and one in El  
17 Mirage.

18 So why are they coming here?

19 Despite the fairly unusual and heavy rainstorm  
20 that we had yesterday, Arizona doesn't suffer many of  
21 the natural disasters that other parts of the country  
22 do. Natural disasters interrupt data center operations.

23 We have a lot of affordable and open land. Much  
24 of that farm land that was originally planted by  
25 Goodyear Tire and Rubber Company may still be available,

1 and there is other agricultural land.

2 We have affordable and reliable electricity from  
3 our utilities here in the State of Arizona. We have  
4 access in the Phoenix area to a major fiber-optic cable  
5 network that runs from California, and parts of its main  
6 trunk come right through Phoenix.

7 You have a fairly pro growth state and local  
8 government. We have tax incentives and other measures  
9 that state and communities like Goodyear have enacted to  
10 encourage high tech companies to come here. And we have  
11 a strong labor market, relatively cheap but educated  
12 labor force.

13 Data centers are, however, unique utility  
14 customers. They use large amounts of electricity to  
15 power and cool the servers that sit within these  
16 industrial buildings. The size of data centers, if you  
17 read about them, is oftentimes described in terms of the  
18 load in megawatts, announcement that Vantage is building  
19 a 50 megawatt data center or a 100 megawatt data center,  
20 or a 200 megawatt data center. And that load profile is  
21 generally flat. Data centers operate 24 hours a day,  
22 seven days a week, and they strive to follow the rule of  
23 the five nines, and that is to be operational  
24 99.999 percent of the time.

25 So let's talk a little about this project and

1 maybe start with the name game a little bit. This is  
2 the Wildcat and Cyclone 230kV line transmission project.  
3 Those names, Wildcat and Cyclone, are used to refer to  
4 the customers; Microsoft is Wildcat, Stream is Cyclone.

5 And those were the project names that were used  
6 at the stage before Microsoft and Stream were ready to  
7 announce their projects, but they were in discussions  
8 with APS about how to serve them, how they could be  
9 served, whether or not there were options for serving  
10 these projects from the sites that they were examining  
11 or had purchased. So we will -- we are trying to be  
12 consistent in terms of using the Wildcat and Cyclone  
13 terms in referring to the project sites, but at times  
14 you may hear us say Microsoft, which is Wildcat, or  
15 Stream, which is Cyclone.

16 I have been confused by those names for a number  
17 of months. I finally think I have them fairly straight  
18 in mind. So if there is a question, please let us know.

19 The project location, you can see from the map  
20 these data center campuses, as I mentioned, are nestled  
21 right up next to each other. They are neighbors. They  
22 are located in the City of Goodyear. They are near to  
23 the Goodyear Phoenix Airport. You can see the, at least  
24 part of the airport operations or lands here. And this  
25 general area is planned for future commercial and

1 industrial use. And there is an ADOT planned freeway  
2 corridor that's coming through this area as well.

3 We always talk about purpose and need for  
4 transmission projects. The purpose is pretty basic:  
5 How do you provide reliable power to these two data  
6 centers? It is the need that's unique.

7 I mentioned that data centers need and use a lot  
8 of electricity. Microsoft, at full buildout, is  
9 projecting a load of 270 megawatts, and Stream is  
10 projecting a load of 350 megawatts at full buildout.  
11 That load eclipses, actually doubles the existing load  
12 that's being served by APS in the Goodyear area.

13 The 69kV system that generally is the feeder and  
14 serves the Goodyear area can't handle that load, so we  
15 are going to need to connect to a 230kV line. And the  
16 closest 230kV line is right here, the Palm Valley-Rudd  
17 230kV line. And you will see a number of colors here by  
18 Palm Valley I believe, and Mr. Spitzkoff will wrap me in  
19 my knuckles if I get it wrong, but I think on one side  
20 it is a 500kV line and on the other side it is a 230kV  
21 line. So that's where we need to get in order to plug  
22 these data centers into the size of a transmission line  
23 that's adequate to serve the load of these two new  
24 customers.

25 The application presents three routes, a

1 preferred route and two alternatives. The second  
2 alternative, this route here with all the links running  
3 down, that was considered as kind of the early project  
4 design of how we would serve these projects. And when  
5 we -- at an early meeting with the Chairman, we  
6 conceived of these projects as separate. I think  
7 Cyclone, Stream Data Centers, was on a slower  
8 development trajectory than Microsoft. And we had  
9 planned initially to serve them or to present them as  
10 two separate CEC applications. And then as we got  
11 closer it appeared that we might combine the cases, the  
12 two CEC applications.

13 And ultimately through the public process and  
14 refinement of the engineering and the design for those  
15 projects, we brought forward the preferred route and the  
16 first alternative route, which served both projects with  
17 much less impact, put considerably more of the  
18 facilities onto the data center sites and campuses and  
19 simply are better routes. And they allowed us to  
20 combine them in a single application.

21 We think the preferred route is the best route  
22 because it maximizes the placement of the project on the  
23 data center land. You can see here what we are looking  
24 out over the left screen is the preferred route. And  
25 you can see that, rather than some of the initial links

1 we looked at running along Broadway Road either on the  
2 north or the south side -- that's here, Broadway -- what  
3 we have done is, through discussions with Microsoft and  
4 Stream and looking at different ways to serve these  
5 projects, put much of the line onto their land.

6 At the same time, we have got to get from these  
7 sites and the substation TS-15 and TS-18 down to the  
8 Palm Valley-Rudd line. So one way or another we are  
9 going to have to get to the south and cross this  
10 agricultural land here.

11 Again, we think the preferred route is the best  
12 route to do that. You will hear testimony that the  
13 Alternative Route 1 is not much different. It throws a  
14 leg along Broadway and drops down to the south there. I  
15 think there is possibly some advantages, but there is  
16 also disadvantages to that route, and you will hear  
17 testimony about that.

18 Our application asks for a 500-foot corridor.  
19 We are modifying that request a bit to expand and ask  
20 for a 850-foot corridor, but only with respect to the  
21 portion of the project that's on the data center  
22 property. These projects are under development. Having  
23 a wider corridor in our CEC gives us the opportunity to  
24 be more flexible and accommodate the development needs  
25 and the development process of both Microsoft and

1 Stream.

2 The right-of-way basic request is for a 120-foot  
3 corridor. I think there are portions where we could  
4 shrink down our right-of-way to 100 feet, but in general  
5 we will be asking for the 120-foot corridor for this  
6 230kV line.

7 The project cost ranges from roughly 4 million,  
8 approximately 4 million, to 6.5 million. And as  
9 Ms. Woodall is always the careful reader of these  
10 applications, these costs only address the transmission  
11 lines. They don't address the substation costs.

12 It is important, I think, to point out, however,  
13 and get to the topic of who pays the cost. These  
14 projects are being built to serve customers. Therefore,  
15 they fall under the APS line extension policy. And  
16 under that policy Microsoft and Stream are advancing or  
17 paying the cost to build this project.

18 And as with, you know, residential subdivisions  
19 and other projects that are built under the line  
20 extension policy, there is an opportunity for that  
21 customer to get refunded some amount of money over time  
22 depending on the revenues. In this case, it is going to  
23 be based on transmission revenue alone. And  
24 Mr. Spitzkoff will testify in greater detail about the  
25 APS line extension policy and how that works. Only some

1 of the facilities are eligible for refund, and that  
2 refund mechanism is based on a time period and, as I  
3 said, revenue.

4 Environmental compatibility. The project is  
5 located within an existing industrial utility hub. And  
6 I think by utility hub we mean you have a number of high  
7 voltage transmission lines down there. Not only do you  
8 have the Palm Valley 230/500kV, but TEP, I believe, has  
9 a 500 or a 345kV line down here. There are a number of  
10 high voltage transmission lines just to the south of the  
11 project.

12 And as I mentioned, this site is already zoned  
13 industrial. And as I understand it, Mr. Petry will talk  
14 about this in greater length, Microsoft went through a  
15 planned area development rezoning of its project. But  
16 this is generally planned to be industrial, commercial  
17 property. And as I mentioned, ADOT has plans for a  
18 future freeway coming through here.

19 We think that all the route alternatives result  
20 in minimal environmental impacts given the total  
21 environment of this area. And we think all route  
22 alternatives are environmentally compatible.

23 At the end of the case we will ask you to grant  
24 us a CEC to construct single circuit 230kV lines to  
25 interconnect the two planned 230kV substations that are

1 located on the data center campuses following the  
2 preferred route.

3           Again, corridor width we are requesting, and  
4 will cover in some depth with Mr. Larsen, is 500 to 850  
5 feet. We are going to construct the project on steel  
6 monopole and H-frame structures. We will talk a little  
7 bit about why we are using H-frames. There are certain  
8 aspects of the project that require an H-frame  
9 structure. And the heights are going to range from 130  
10 to 190 feet.

11           We are going to present our case through the  
12 three witnesses you see here at the end. Mr. Spitzkoff,  
13 and he has a title that covers so many things that I can  
14 never commit it to memory, but he is essentially in  
15 charge of transmission planning of APS, and I will let  
16 him rattle off his entire long title. Mr. Larsen has  
17 been with Arizona Public Service Company for a long  
18 time, and he is the project manager for this project.  
19 And Devin Petry is with the Environmental Planning  
20 Group, and he is the senior environmental planner who  
21 assisted with this project along with others at EPG.

22           In other cases we have used a witness panel, but  
23 we haven't really used them as a panel discussion. And  
24 that is present one witness, and they go through their  
25 slide deck, and then we move to the next witness and go

1 through their slide deck.

2           What we have tried to do here -- and we think is  
3 effective and we hope you will find it effective -- is  
4 to break up our case presentation and the slide decks  
5 that were prepared and sponsored by each witness into  
6 kind of chapters or sections, and we will move between  
7 the witnesses depending on the topic. And there may be  
8 certain topics in which we will focus one witness, but  
9 the other witness may want -- one or more of the other  
10 witnesses may contribute. We think that's an effective  
11 way to present it and that's our plan.

12           So what we have done is we have prepared, and,  
13 you know, I will talk about the iPads here in a minute,  
14 but we have put together the reshuffled deck of the  
15 PowerPoint slides in the manner in which we intend to  
16 present them. And that's found on your iPad, and I  
17 think we also have hard copies available if you want  
18 one.

19           But that is how we plan to present our case,  
20 using this witness panel. It won't be one witness, then  
21 witness No. 2, witness No. 3. We will move between the  
22 witnesses, and you will have on your iPad in front of  
23 you kind of the way, the manner in which we present and  
24 broke up up their slides into chapters.

25           We will have a Google Earth flyover simulation,

1 which will give you an aerial view of the routes. You  
2 have seen these, been on this Committee before and you  
3 have seen these Google Earth flyover simulations. We  
4 have one that, I think, gives you a better  
5 understanding, certainly, than sitting here today and  
6 looking at a static map on what the projects and the  
7 routes will look like. And we also have a route tour  
8 planned where, if you are interested, we will go to take  
9 you out and to show you the routes.

10           Some of the members of our team went out and did  
11 that route tour this morning. We think it is valuable.  
12 I think it gives you much greater insights in terms of  
13 what things look like actually on the ground. And we  
14 would encourage you, if you can, to do that. I know not  
15 all the members -- a route doesn't work for everyone,  
16 but, you know, if you are able to join us for a route  
17 tour, we are ready to do that, and will preview that for  
18 you this afternoon if we have time.

19           We are trying to cut down on the amount of  
20 environmental impacts that these cases create, so we  
21 present our materials on the iPad that you have in front  
22 of you. And this might be a good opportunity for me to  
23 have Kevin Duncan come up and just orient you to what  
24 you can find on the iPad and where it is.

25           MR. DUNCAN: Thank you, Mr. Derstine.

1 Mr. Chairman, members of the Committee, I just  
2 want to take a moment to orient you to the iPad.

3 Can you go ahead and unfreeze that.

4 So this is the screen as it appeared when you  
5 opened it. But if by chance you have resumed the home  
6 screen, which looks like this, all you need to do is  
7 click on books, and it takes you back to this page.

8 You will see that there are five documents  
9 there, starting with the first one that is the  
10 application. Just simply need to click on any of these,  
11 it will open it for you to review. The second one is  
12 the supplemental packet. The third one is the slides  
13 that Mr. Derstine referenced, which are ordered as they  
14 will follow in our presentations over the next several  
15 days.

16 The final two documents are information on the  
17 corridor maps which will be discussed later in  
18 testimony. The first is the preferred map. The second  
19 is our preferred route -- excuse me. Second is the  
20 alternative.

21 And as you open these documents, all you need to  
22 do is slide your finger to go back and forth. It will  
23 take you to the next page. Clicking on it will allow  
24 you to click on the arrow in the upper left-hand corner  
25 which takes you back to the document pages.

1           In addition, after opening a document, you may  
2 click again, tap on the page and then click on the three  
3 lines that appear at the top, and it will take you to  
4 this view where you can skip to any page you would like.  
5 In this view in the upper right-hand corner it says  
6 resume. That will take you back to the last page you  
7 were on.

8           Are there any additional questions on use of the  
9 iPad?

10           CHMN. CHENAL: Show us the last feature.

11           MR. DUNCAN: Yes, sure can. So after tapping on  
12 the page, you -- up at the top upper left-hand corner  
13 there are three lines. Click on those three lines and  
14 it opens up a view -- and this works on any of the  
15 documents -- where you have a view of all the pages, and  
16 clicking on any page will take you there. But if you  
17 simply want to resume the page that you were at before,  
18 in the upper right-hand corner it says resume. Click on  
19 resume and it takes you back to the page you were at.

20           CHMN. CHENAL: Thank you.

21           MR. DUNCAN: Any other questions?

22           (No response.)

23           MR. DERSTINE: Okay. Thank you, Kevin.

24           The last bullet there on my case presentation  
25 slide is the placemat. On the one side we have got the

1 three routes then as they are in the application, the  
2 preferred, Alternative Route 1, Alternative Route 2.

3 On the back you have two visual simulations.  
4 And what we have done is cherry picked what we think are  
5 the greatest visual impacts of the project. So what you  
6 have before you in those, there will -- I think  
7 Mr. Petry will present five simulations at four key  
8 observation points. What you have on the back of the  
9 placemat, I think, are what Mr. Petry will testify to  
10 are the greatest visual impacts of the project. And we  
11 will get into greater depth of those in the heart of the  
12 case, but that's what is on the reverse side of the  
13 placemat.

14 My wife told me that this was what -- we were  
15 sitting watching Field of Dreams, this Kevin Costner  
16 movie. And I said, hey, that's my siting case, kind of.  
17 And she told me not to use it, but I am going to anyway.

18 There is a scene in the Field of Dreams where  
19 Kevin Costner is walking through a corn field, not a  
20 cotton field, but corn field. And he hears this voice  
21 that says if you build it, he will come, or if you build  
22 it, they will come.

23 And that made me think about this case in this  
24 sense, and it requires a twist of the phrase. And it  
25 becomes if they come, you have to build it. Data

1 centers are coming to the west valley, these two  
2 projects, and there is several behind it.

3 APS serves the west valley of Phoenix. It has  
4 an obligation to provide safe and reliable power. It  
5 has to get to a 230kV transmission line in order to  
6 serve the heavy load of these two data center projects.  
7 And the question is how do you do that in a way that  
8 minimizes the environmental impacts, minimizes the  
9 impacts to landowners, residences, and businesses. And  
10 that's what our case is about. And we are looking  
11 forward to presenting you our case and telling you how  
12 we plan to do that.

13 Thank you.

14 CHMN. CHENAL: Thank you.

15 Member Woodall.

16 MEMBER WOODALL: Mr. Derstine, so everything  
17 that's on our tablet has been marked as an exhibit, is  
18 that correct?

19 MR. DERSTINE: Everything that is on your tablet  
20 has been marked as an exhibit except for the reshuffled,  
21 reordered case presentation deck. And we have a copy  
22 for the court reporter to mark separately, and we will  
23 file that in the docket as well.

24 MEMBER WOODALL: And we don't have hard copies  
25 of that; we just have it on the tablet?

1 MR. DERSTINE: I believe we have hard copies  
2 available. And if you would prefer to have a hard copy  
3 of the actual case, presentation case, we can get you  
4 that.

5 MEMBER WOODALL: Thank you so much, sir.

6 CHMN. CHENAL: Mr. Emedi.

7 MR. EMEDI: Chairman Chenal, members of the  
8 Committee, thank you for your time today.

9 Staff has had the opportunity to review the  
10 company's application, as well as their supplemental  
11 packet. And we had also actually requested some  
12 technical studies that we also reviewed. And based on  
13 that, we did not identify any issues or concerns with  
14 the application. And also based on that review, Staff  
15 did not believe that we needed to present a witness at  
16 this hearing.

17 However, we will, as reflected in the letter  
18 that we docketed on September 20th, we did want to be  
19 here to take in the evidence that was presented,  
20 potentially do some cross-examination. And should we  
21 learn something significant that would prompt us to  
22 revisit our position, we would make the appropriate  
23 filing to notify the Committee of that change in  
24 position, but as of right now, nothing has changed since  
25 we docketed that letter last Friday.

1 Thank you.

2 CHMN. CHENAL: And Mr. Emedi, I don't believe  
3 that letter has been marked as an exhibit by the  
4 applicant. Is it your intention -- or maybe I can ask  
5 you to introduce that as an intervenor's exhibit to the  
6 proceeding.

7 MR. EMEDI: I can definitely do that. And I do  
8 have copies. I think I have enough for everyone here,  
9 but I can definitely introduce that as an exhibit.

10 CHMN. CHENAL: Good. Thank you very much.

11 All right. Any questions from the Committee?  
12 Member Woodall.

13 MEMBER WOODALL: Just to restate, I will need a  
14 hard copy version of the revised slide deck.

15 Thank you.

16 MR. DERSTINE: Are there other members of the  
17 Committee that would like a hard copy version?

18 (No response.)

19 CHMN. CHENAL: Okay, thank you.

20 MR. DERSTINE: We will get you one.

21 CHMN. CHENAL: All right. At this time I  
22 normally like to ask if there is anyone in the audience  
23 that wishes to make any public comment before we start  
24 with the first swearing in of the witness panel and  
25 begin with the first witness. Don't everyone rush at

1 once to the microphone.

2 Okay. We don't see anybody. So with that, let  
3 me turn it back to the applicant. And counsel, and if  
4 you would like to begin your presentation of your case,  
5 I will be happy to swear in the witnesses.

6 All right. Does each member of the panel -- and  
7 let me know your preference, an oath or an affirmation.  
8 Mr. Larsen.

9 MR. LARSEN: Oath.

10 CHMN. CHENAL: Mr. Spitzkoff.

11 MR. SPITZKOFF: An oath.

12 CHMN. CHENAL: Mr. Petry.

13 MR. PETRY: Affirmation, please.

14 CHMN. CHENAL: Okay. For the oath, if would you  
15 raise your right hand, please.

16 (Jason Spitzkoff and Brad Larsen were duly  
17 sworn.)

18 CHMN. CHENAL: And Mr. Petry, would you raise  
19 your right hand, please.

20 (Devin Petry was duly affirmed.)

21 CHMN. CHENAL: All right. Thank you very much.

22 Mr. Derstine or Ms. Benally.

23 MS. BENALLY: Thank you, Chairman Chenal.

24 Gentlemen, are you ready to start?

25 MR. LARSEN: Yes.

1 MS. BENALLY: How I plan on proceeding this  
2 afternoon is doing an introduction of each one of our  
3 witnesses so that you have some background around what  
4 their experience, education, professional and otherwise  
5 is, and their prior experience with the Line Siting  
6 Committee.

7 I would also like to begin with Mr. Brad Larsen,  
8 then I will move to Mr. Jason Spitzkoff -- pardon me, to  
9 Mr. Devin Petry, and then I will close with Jason  
10 Spitzkoff.

11

12 JASON SPITZKOFF, BRAD LARSEN, and DEVIN PETRY,  
13 called as witnesses on behalf of the Applicant, having  
14 been previously duly sworn or affirmed by Chairman  
15 Chenal to speak the truth and nothing but the truth,  
16 were examined and testified as follows:

17

18

DIRECT EXAMINATION

19 BY MS. BENALLY:

20 Q. So Mr. Larsen, would you please state your name  
21 for the record.

22 A. (BY MR. LARSEN) D. Brad Larsen, L-A-R-S-E-N.

23 Q. And Mr. Larsen, you are a project manager of  
24 transmission and facility siting for APS, is that  
25 correct?

1 A. (BY MR. LARSEN) That is correct.

2 Q. And you are the project manager for the Wildcat  
3 and Cyclone 230kV transmission line project?

4 A. (BY MR. LARSEN) Yes, I am.

5 Q. Would you please share with the Committee an  
6 overview of your education and your work experience.

7 A. (BY MR. LARSEN) Yes. I have a bachelor of  
8 science in electrical engineering from Arizona State  
9 University. I am a professional engineer, electrical  
10 engineer, in the State of Arizona and have been for many  
11 years. I am also a senior member of the Institute of  
12 Electronic and Electrical Engineers, which is an  
13 international organization of engineers.

14 I have approximately 30 years with APS in  
15 various roles. I have served as a transmission and  
16 subtransmission planning engineer. I have -- sorry. I  
17 have also performed duties as an engineer in substation  
18 engineering, as well as the leader of engineering and  
19 construction of substations at APS. I have also served  
20 as a supervisor in the underground construction  
21 engineering and project management for distribution and  
22 transmission systems. And most importantly, I do have  
23 about 15 years experience as a siting consultant.

24 Q. Thank you, Mr. Larsen.

25 Let's now move to the topics that you will be

1 covering in your testimony as we proceed into this  
2 afternoon and in the next couple days of hearing. Would  
3 you please cover what those topics are.

4 A. (BY MR. LARSEN) Yes. Over the next couple days  
5 I will cover a number of topics that you will see on the  
6 right screen there. We will touch on the application  
7 and the public notice of hearings. I will give a brief  
8 project description, talk about how the project was  
9 developed, and how we developed the links and then into  
10 line alternatives.

11 And I also talk about the corridors and  
12 rights-of-way, project costs, type of structures used  
13 for these facilities. And I will also discuss the  
14 public and agency outreach that we performed.

15 Q. Thank you, Mr. Larsen.

16 I would like to cover several of the exhibits  
17 that were filed by APS that you are going to be  
18 sponsoring.

19 A. (BY MR. LARSEN) Okay.

20 Q. Do you have the exhibit binder in front of you?

21 A. (BY MR. LARSEN) Yes, I do.

22 Q. And this would be the supplemental packet?

23 A. (BY MR. LARSEN) Yes.

24 Q. The Chairman's procedural order required that  
25 the parties file a summary of your testimony. Did you

1 prepare a summary?

2 A. (BY MR. LARSEN) Yes, I did.

3 Q. And your testimony summary is marked as APS  
4 Exhibit 2, is that correct?

5 A. (BY MR. LARSEN) That is correct.

6 Q. Do you have any changes or corrections that you  
7 would like to make to that testimony summary today?

8 A. (BY MR. LARSEN) No, I do not.

9 Q. You also prepared PowerPoint slides that will be  
10 used as a part of your testimony which are being shown  
11 on the screen today that you will use as a part of the  
12 testimony over the next several days. And is your  
13 presentation, the PowerPoint presentation, marked as APS  
14 Exhibit 3?

15 A. (BY MR. LARSEN) Yes, it is.

16 Q. Was APS-3 prepared by you or under your  
17 direction?

18 A. (BY MR. LARSEN) Yes, it was.

19 Q. Your PowerPoint presentation will include  
20 various maps, photos, and information. Would you share  
21 with the Committee the source of the maps, photos and  
22 information that are included in your presentation.

23 A. (BY MR. LARSEN) Yes. Many of the maps, the  
24 diagrams, graphics that you will see in my testimony  
25 were prepared by EPG, our environmental consultant,

1 under my direction.

2 Q. And those maps, the photos, and information that  
3 are included in your presentation, are those also  
4 included for the most part in APS's application, which  
5 is marked as APS-1?

6 A. (BY MR. LARSEN) Yes, they are.

7 Q. And did you review your PowerPoint presentation,  
8 APS-3, before the hearing today?

9 A. (BY MR. LARSEN) Yes, I did.

10 Q. And do you have any corrections you wish to make  
11 to APS-3?

12 A. (BY MR. LARSEN) No, I do not have any  
13 corrections.

14 Q. And is the information presented in APS-3 true  
15 and correct, to the best of your knowledge?

16 A. (BY MR. LARSEN) Yes, it is.

17 MS. BENALLY: Okay. Thank you.

18 Chair Chenal, if you deem it appropriate, I  
19 would like to move for the admission of APS Exhibits 2  
20 and 3 at this time.

21 CHMN. CHENAL: Any objection to APS-2 and APS-3?

22 (No response.)

23 CHMN. CHENAL: APS-2 and APS-3 are admitted.

24 (Exhibits APS-2 and APS-3 were admitted into  
25 evidence.)

1 MS. BENALLY: Thank you.

2 BY MS. BENALLY:

3 Q. I would like to now move to Mr. Devin Petry.  
4 Mr. Petry, would you please state your name and business  
5 address.

6 A. (BY MR. PETRY) Yes. My name is Devin Petry,  
7 and my business address is 4141 North 32nd Street,  
8 Phoenix, Arizona.

9 Q. Would you describe your education and your  
10 professional background for the Committee, please.

11 A. (BY MR. PETRY) Yes. I received a bachelor of  
12 arts in geography from the University of Arizona. I am  
13 a project manager and environmental planner at EPG, or  
14 Environmental Planning Group. And I have 11 years of  
15 experience in environmental planning, facility siting  
16 studies, and permitting, and have managed or  
17 participated in more than 40 environmental planning  
18 projects and impact assessment studies.

19 Q. Have you testified previously before the Arizona  
20 Power Plant and Transmission Line Siting Committee?

21 A. (BY MR. PETRY) Yes, I have. I have previously  
22 testified before the Siting Committee in Case No. 162,  
23 the Sonoran solar energy generation tie line project, as  
24 well as Case No. 174, the Pinal Central energy center  
25 generation tie line project.

1 Q. Let's move now to a description of your  
2 employer, which is EPG. Would you please describe EPG  
3 for the Committee.

4 A. (BY MR. PETRY) Yes. EPG is an  
5 interdisciplinary environmental planning and permitting  
6 firm. We have offices in four states across the western  
7 United States. We are headquartered here in Phoenix,  
8 Arizona. EPG personnel have provided testimony in more  
9 than 30 cases for the Siting Committee.

10 Q. And how did EPG assist with the preparation of  
11 the application that APS filed for this particular  
12 project?

13 A. (BY MR. PETRY) We at EPG were retained by APS  
14 to assist in the preparation for the project in  
15 performing the environmental resource studies, as well  
16 as assisting with the public involvement program.

17 Q. I would like to now move to the exhibits that  
18 you prepared for this hearing. You prepared a summary  
19 of your testimony that was filed on September 12, 2019,  
20 which is marked as APS-6, is that correct?

21 A. (BY MR. PETRY) Yes.

22 Q. And do you have any corrections you would like  
23 to make to APS-6?

24 A. (BY MR. PETRY) No.

25 Q. You also prepared a PowerPoint presentation,

1 which is marked as APS-7. And that's also what is being  
2 shown on the screens today, is that correct?

3 A. (BY MR. PETRY) Yes.

4 Q. And was that exhibit prepared by you?

5 A. (BY MR. PETRY) Yes.

6 Q. Your PowerPoint slides include maps, photos, and  
7 information. Just as I asked Mr. Larsen, I will ask you  
8 the same question: What is the source of that  
9 information?

10 A. (BY MR. PETRY) That information came from many  
11 sources, including online aerial imagery. Some  
12 information came from planning documents identified  
13 through the local and regional jurisdictions, as well as  
14 information developed by myself or staff under my  
15 supervision.

16 Q. And much of that information you just covered,  
17 maps, photos and information, are included in APS's  
18 application for the CEC, is that correct?

19 A. (BY MR. PETRY) Yes.

20 Q. Have you reviewed your PowerPoint presentation  
21 since it was filed?

22 A. (BY MR. PETRY) Yes, I have.

23 Q. Okay. And do you have any changes or  
24 corrections you would like to make to that presentation  
25 today?

1 A. (BY MR. PETRY) No.

2 Q. And is the information that is included in the  
3 PowerPoint presentation true and accurate, to the best  
4 of your knowledge?

5 A. (BY MR. PETRY) Yes.

6 Q. I would like for you now to briefly cover the  
7 purpose of your testimony today.

8 A. (BY MR. PETRY) Certainly. The purpose of my  
9 testimony is to provide the Siting Committee with  
10 information on the environmental studies that we  
11 completed, which include the existing and planned land  
12 uses, which are identified under application Exhibits A  
13 and B; the biological resources, which are included  
14 under application Exhibits C and D; scenic areas,  
15 historic sites, and structures and archeological sites,  
16 which are included under application Exhibit E;  
17 recreational purposes and aspects, included under  
18 application Exhibit F; and existing plans, identified  
19 under application Exhibit H.

20 I will also present to the Committee some  
21 photographic simulations that we have completed as part  
22 of the project, as well as the results of these  
23 environmental studies, and, as was indicated previously,  
24 provide the Committee with a virtual tour or Google  
25 Earth overview of the project alternatives.

1 MS. BENALLY: Thank you, Mr. Petry.

2 Chairman Chenal, with the completion of  
3 Mr. Petry's introduction, I would like to move for the  
4 admission of APS-6 and APS-7.

5 CHMN. CHENAL: All right. Applicant moved APS-6  
6 and 7. Any objection?

7 (No response.)

8 CHMN. CHENAL: No objections, APS-6 and 7 are  
9 admitted.

10 (Exhibits APS-6 and APS-7 were admitted into  
11 evidence.)

12 MS. BENALLY: Thank you.

13 I will now move to the introduction of our final  
14 witness on the panel, Mr. Spitzkoff.

15 BY MS. BENALLY:

16 Q. Would you please state your full name for the  
17 record.

18 A. (BY MR. SPITZKOFF) Jason Spitzkoff. That's  
19 S-P-I-T-Z-K-O-F-F.

20 Q. As co-counsel mentioned earlier today, you have  
21 a number of different titles or departments that you are  
22 responsible for. So I note that you are the manager for  
23 transmission planning and engineering, interconnections  
24 development, and facilities siting. Is that correct?  
25 Did I capture them all?

1 A. (BY MR. SPITZKOFF) Yes, that's correct.

2 Q. And in these roles you play a -- pardon me,  
3 played a significant involvement with this project, is  
4 that correct?

5 A. (BY MR. SPITZKOFF) Yes.

6 Q. Would you please familiarize the Committee with  
7 an overview of your education and your work experience.

8 A. (BY MR. SPITZKOFF) I received a bachelor of  
9 science in electrical engineering and a bachelor of  
10 economics from Rutgers University.

11 I have been with APS for over 18 years, the  
12 first 14 years of that as a transmission planning  
13 engineer, then three and a half years as the supervisor  
14 of transmission planning and engineering.

15 And my current role is manager of transmission  
16 planning, interconnection development, and facilities  
17 siting for APS. In that time, I have had a number of  
18 roles locally and throughout the western  
19 interconnection.

20 I have been a member of various WECC committees.  
21 WECC is the Western Electricity Coordinating Council.  
22 That's the regional reliability organization for the  
23 western interconnection. I am a member of the planning  
24 management committee of WestConnect. WestConnect is the  
25 regional planning group that APS is a part of. I am a

1 member of the NERC planning committee. NERC is the  
2 North American Electric Reliability Corporation. They  
3 are the reliability entity for all of North America.

4 I have been the APS subject matter expert for a  
5 number of BTAs. That's the Biennial Transmission  
6 Assessment. That is a function the ACC performs. And I  
7 have previously testified in Line Siting Case No. 136.

8 Q. And just to clarify, when you refer to the ACC,  
9 you are talking about the Arizona Corporation  
10 Commission?

11 A. (BY MR. SPITZKOFF) Yes.

12 Q. Thank you.

13 Mr. Spitzkoff, you prepared a summary of your  
14 testimony that was filed in APS's supplemental filing on  
15 September 12, 2019, and it is marked as APS Exhibit 4,  
16 is that correct?

17 A. (BY MR. SPITZKOFF) That is correct.

18 Q. And do you have any corrections you would like  
19 to make to Exhibit 4 today?

20 A. (BY MR. SPITZKOFF) No.

21 Q. You also prepared a PowerPoint slide that you  
22 will be working from to perform or complete your  
23 testimony before the Committee. That's also marked as  
24 APS Exhibit 5, is that correct?

25 A. (BY MR. SPITZKOFF) That is correct.

1 Q. And the PowerPoint presentation marked as APS-5  
2 is what we have projected on the screens today?

3 A. (BY MR. SPITZKOFF) Yes.

4 Q. And was APS-5 prepared by you or under your  
5 direction?

6 A. (BY MR. SPITZKOFF) Yes.

7 Q. And the PowerPoint slides that you are going to  
8 be working from to support your testimony include maps,  
9 photos, and other information. Would you please  
10 describe the source of that information in your  
11 testimony.

12 A. (BY MR. SPITZKOFF) Most of the maps were  
13 developed by Environmental Planning Group as part of  
14 this case and are included in the application.

15 There is a couple of maps that are produced by  
16 in-house APS personnel, some system maps. There is also  
17 some pictures that were -- that are included that are  
18 from APS personnel. And there is a video in my  
19 presentation that was taken from the website of Stream  
20 Data Centers and that we downloaded and is included.

21 Q. Okay, great. Thank you.

22 Now, with the exception of the video  
23 presentation from the internet, most of the information  
24 that is included in this slide deck is included in APS's  
25 application for a CEC, is that correct?

1 A. (BY MR. SPITZKOFF) Yes.

2 Q. Do you have any corrections you would like to  
3 make to APS-5?

4 A. (BY MR. SPITZKOFF) No.

5 Q. And is the information that's presented in APS-5  
6 true and accurate to the best of your knowledge?

7 A. (BY MR. SPITZKOFF) Yes.

8 MS. BENALLY: Okay, thank you.

9 Chair Chenal, I would like to move for admission  
10 of APS-4 and APS-5 at this time.

11 CHMN. CHENAL: Okay. The applicant asked for  
12 the admission of APS-4 and 5. Any objections?

13 (No response.)

14 CHMN. CHENAL: Hearing none, APS-4 and 5 are  
15 admitted.

16 (Exhibits APS-4 and APS-5 were admitted into  
17 evidence.)

18 MS. BENALLY: Thank you. That concludes the  
19 introduction of our witnesses on the panel today, and I  
20 will turn it now to co-counsel, Mr. Derstine.

21 MR. DERSTINE: Thank you.

22 Mr. Chairman, members of the Committee, our next  
23 chapter in our presentation will be through  
24 Mr. Spitzkoff. And we are going to cover, give you some  
25 background and understanding of the APS service

1 territory and its transmission system.

2

3

DIRECT EXAMINATION

4 BY MR. DERSTINE:

5 Q. So with that, Mr. Spitzkoff, let me have you  
6 start with talking and giving us a high level overview  
7 of APS's service territory and its system.

8 A. (BY MR. SPITZKOFF) Yeah. So APS has been  
9 serving Arizona for over 125 years. We provide service  
10 in 11 of Arizona's 15 counties. Our service territory  
11 encompasses over 35,000 square miles. We have 34,000  
12 miles of transmission lines.

13 And let me provide some orientation to the map  
14 on the left screen. You can see the outline of the  
15 State of Arizona. On the top center is the Navajo  
16 Generating Station, this is by Page, Arizona; the Four  
17 Corners Generating Station, which is just near  
18 Farmington, New Mexico.

19 The areas highlighted in blue is the APS service  
20 territory. And you can see it spans from northern  
21 Arizona all the way down to southern Arizona with  
22 territory in Yuma County all the way down to Cochise  
23 County.

24 APS has 1.2 million retail and wholesale  
25 customers. And if the -- we get the next --

1 CHMN. CHENAL: Excuse me, Mr. Spitzkoff. Member  
2 Woodall has a question.

3 MEMBER WOODALL: Mr. Spitzkoff, with respect to  
4 the system map that you had on the left-hand side, does  
5 that have a listing of all high voltage and extra high  
6 voltage lines that are APS owned or APS may have a joint  
7 interest in with someone?

8 MR. SPITZKOFF: Yes. Thank you for that. I  
9 should have pointed that out.

10 The lines in the black are APS owned and/or  
11 operated lines, APS owns 100 percent or joint ownership  
12 with other companies. There are one or two that are  
13 lines from other utilities we thought are significant  
14 enough to just include them on the map.

15 And really the only high voltage lines that  
16 would not be on here are the ones more in the Phoenix  
17 metropolitan region. Those are a little too numerous to  
18 show on a map like this.

19 MEMBER WOODALL: And may I ask, sir, what is the  
20 source of this map? Did APS prepare it?

21 MR. SPITZKOFF: Yes. This is a map that APS has  
22 been using for a number of years.

23 MEMBER WOODALL: And if I, for example, wanted a  
24 copy of it or any member of the public, you would  
25 provide it to them?

1 MR. SPITZKOFF: I believe so.

2 MEMBER WOODALL: I was just trying to determine  
3 if there is any sensitive information on here. I  
4 realize -- or let me ask you this: The lines that are  
5 depicted here do not reflect the geographic location of  
6 the transmission lines, is that correct?

7 MR. SPITZKOFF: That is correct. It is too  
8 general in nature.

9 MEMBER WOODALL: Okay.

10 MR. SPITZKOFF: And not showing the voltage  
11 levels also brings it up a level enough so that we  
12 don't -- would not consider this map what some people  
13 know as confidential electric infrastructure  
14 information.

15 MEMBER WOODALL: Thank you, Mr. Spitzkoff.

16 CHMN. CHENAL: Mr. Spitzkoff, I had a question.  
17 The generating plants, Coronado, Four Corners, Cholla,  
18 and Navajo, what is, if you know, the plan for  
19 decommissioning any or all of those plants? What is the  
20 timeline for that?

21 MR. SPITZKOFF: So I could speak to some of  
22 them. Not all of them are APS plants or plants that APS  
23 has a joint share in.

24 The Navajo generating plant up at the top center  
25 there, the plan for that is, that plant will be

1 decommissioned by the end of this year. I believe the  
2 first unit may have already come off line. But all  
3 three are planned to come off line before the end of  
4 this year.

5 Some of the units, 1, 2 and 3, at Four Corners,  
6 which is shown up here, came off line a number of years  
7 ago. And Units 4 and 5 are still operational. I am not  
8 aware of if there is a specific date for the retirement  
9 of those. It would be definitely out in the future.

10 Cholla Unit 2 -- and Cholla is shown -- you can  
11 see where I am pointing here, that's a coal plant. I  
12 think it is outside St. Joseph, Arizona. Unit No. 2 was  
13 retired a couple of years ago. I think PacifiCorp is  
14 the owner of Unit 4, and they have a plan to retire  
15 that. I can't recall if that's at the end of 2020 or  
16 so, I think, something like that.

17 The other coal plant I think you mentioned was  
18 Coronado and Springerville, which is not shown on here.  
19 Those APS has no, no ownership in, and I am not aware of  
20 any -- what their plans for retirement are.

21 CHMN. CHENAL: Thank you.

22 MR. SPITZKOFF: Okay. So now the map on the  
23 left is a more close in view of the Phoenix metropolitan  
24 area.

25 Let me just provide a little orientation. You

1 can see through the center of the map up and down is  
2 Interstate 17. You can see basically the center of the  
3 map horizontally is Interstate 10. And the Loop 101 is  
4 in red and Loop 303 here.

5 The yellow star is intended to show the general  
6 area that we are in today, which is the Goodyear area.  
7 The areas in white are the APS service territory. The  
8 areas in gray are non-APS service territory. And so of  
9 the 1.2 million retail customers, the bulk of those  
10 customers are in the Phoenix metropolitan area. Also in  
11 the APS, the full APS system peak, the highest peak for  
12 our system was 7,367 megawatts. And that was in 2017.  
13 Again, the large bulk of that would be in the Phoenix  
14 metropolitan area.

15 BY MR. DERSTINE:

16 Q. Mr. Spitzkoff, do you have a map that can focus  
17 in a little more closely on the transmission resources  
18 that are in the Goodyear area?

19 A. (BY MR. SPITZKOFF) Yes, we do. So this map on  
20 the left is again a little bit more focused in on the  
21 west valley and the southern part of the west valley.

22 So I am going to trace out, really this area is  
23 the general Goodyear area, with Avondale, and then City  
24 of Phoenix starting off on that side and City of Buckeye  
25 off to the west. You can see Loop 101 in the red on the

1 right side of the screen, Interstate 10 again traversing  
2 across the middle of the screen, and then Loop 303 a  
3 little bit just to the left center.

4           What this shows is the 69kV system that serves  
5 the area. Like most areas, the actual load service is  
6 off of a 69kV network with 69 to 12kV substations. So  
7 the lines that you see in black are 69kV lines, the  
8 solid black. And then the triangles depict our 69 to  
9 12kV substations. And those are where the load-serving  
10 feeders come out of.

11           What you also see on this map with the black  
12 squares, and there is one open white square here at  
13 Rudd, these are the transmission sources that feed into  
14 the network. So this area has two main sources, the  
15 Palm Valley 230 substation, and the White Tanks 230  
16 substation, and the Rudd 500/230 substation over here.

17       Q.     With that background on the Goodyear area  
18 transmission system, maybe this is the right time to  
19 talk about data centers.

20           Mr. Spitzkoff, you are an expert in  
21 transmission, transmission planning. You are not an  
22 expert in data centers, but we have asked you to give  
23 the Committee a little bit of a background on data  
24 centers and some of the key features. So let's talk  
25 about that now.

1           Why don't you start with a bit of an overview of  
2 some of the key features of data centers and why they  
3 are unique customers for APS.

4           A.       (BY MR. SPITZKOFF) Sure. So the first bullet  
5 on the right screen is kind of the dictionary definition  
6 of a data center. Really what it is is, especially what  
7 it is called hyperscale data centers, are large  
8 buildings that are specially designed to house high  
9 speed and highly efficient computers, or servers, and  
10 other supporting equipment. What these servers often  
11 provide, they provide service for search engines, cloud  
12 computing, and other web-based services.

13           The picture on the left is a picture you can  
14 find on the internet. And I don't know exactly which  
15 data center it is from. It is just a generic picture,  
16 but you can see all of the servers here set up in the  
17 rows that you will find inside data centers.

18           Data centers consume a lot of electricity in  
19 order to operate and cool the equipment. They operate  
20 24 hours a day, seven days a week, 365 days a year. And  
21 as Mr. Derstine pointed out earlier, they generally have  
22 a flat load profile with a 90 percent or greater load  
23 factor.

24           CHMN. CHENAL: Member Woodall has a question.

25           MEMBER WOODALL: Mr. Spitzkoff, I am not sure if

1 you are going to get into this later, but I was curious  
2 to know whether or not there is any specific technical  
3 specifications or equipment that is needed for  
4 transmission lines that are providing this type of  
5 service. And if I have interrupted your orderly  
6 thoughts, I apologize.

7 MR. SPITZKOFF: I can provide just a high level  
8 response right now, for sure. So we would have two  
9 thoughts on that. The main need from a transmission  
10 perspective for data centers is reliability. The other  
11 need is, given the density and the high amount of load,  
12 it is to have, to be at a large enough transmission  
13 level that can handle that amount of power.

14 MEMBER WOODALL: I notice that on the proposed  
15 routing it looks like you have, I don't want to call it  
16 a circle, but it looks like there is -- if one thing  
17 went out, it looks like others might be able to stand at  
18 the ready. I am wondering if you could explain that to  
19 us.

20 MR. SPITZKOFF: Sure. That goes to the  
21 reliability that I was speaking of and what we call, or  
22 sometimes you will hear, N-1 capability. You can lose  
23 any one element of any one line, any one transformer,  
24 without loss of load. All of the alternatives meet that  
25 criteria and provide a networked service. So it is not

1 a single source or a radial line. You would have a line  
2 coming in from two different directions, so if you lose  
3 one direction, you can still serve from the other side.

4 MEMBER WOODALL: I ask that question, number  
5 one, I am interested, and, number two, in honor of  
6 former electric utility engineer for the Arizona  
7 Corporation Commissioner, Jerry Smith, who would make  
8 this point in hearings. And I will be sure to tell him  
9 that I did. Thank you.

10 CHMN. CHENAL: Member Haenichen.

11 MEMBER HAENICHEN: Thank you, Mr. Chairman.

12 In the event of an outage, where the center  
13 actually loses all power coming in, what happens to the  
14 status of all proceedings that we are going through,  
15 happening at that data center?

16 MR. SPITZKOFF: So I will answer that again with  
17 the caveat I am not a data center expert. But there is  
18 a lot of moving parts there. These centers will  
19 generally have backup generation. So there is a battery  
20 system that will span the time until a quick start,  
21 typically diesel generation, can get up and running at  
22 full load to provide power for their sites. And  
23 assuming at the same time the data center personnel  
24 would be trying to, if they don't already have the  
25 information backed up, shift the information to other

1 sites that they have either locally or across the  
2 country.

3 MEMBER HAENICHEN: Thank you.

4 BY MR. DERSTINE:

5 Q. We are not going to have an opportunity to take  
6 the Committee on a tour of a data center as part of this  
7 hearing, but I think you have a video that kind of walks  
8 us through a data center. I think it is a Stream data  
9 center in another part of the country. Can you show us  
10 that now?

11 A. (BY MR. SPITZKOFF) Yes. So this video that we  
12 will play in a second on the left screen is a video from  
13 Stream Data Centers' website. It is representative of  
14 what you -- the various pieces that you will find in a  
15 data center. What it does is kind of walks you through  
16 the data center. And this facility is their data center  
17 in the Houston area.

18 And if we could play, start the video.

19 (Video playing.)

20 MR. SPITZKOFF: And the first thing you are  
21 going to see is the security features of the data  
22 center. Given the nature of what they are, the  
23 information that they have in their critical nature,  
24 security is important for these facilities.

25 As we come out the man trap, you will see office

1 space to house the support personnel. Then we will move  
2 into dedicated telecommunications and networking rooms,  
3 and then move into the largest portions of the data  
4 centers, which are the data halls. This is where all of  
5 those networks, those rows and rows of servers are  
6 located, a power room, and then finally outside the  
7 facility where they have various equipment needed to run  
8 the buildings.

9 (Video concludes.)

10 MR. SPITZKOFF: So very generally that's, you  
11 know, the inner workings of a data center. This is just  
12 a representative sample of one type of data center. And  
13 I just want to point out a couple of items for  
14 reference --

15 CHMN. CHENAL: Before you begin, Mr. Spitzkoff,  
16 just a question. You don't have to go back to the  
17 video, but you mentioned equipment that was on the  
18 outside of the building that you said was necessary to  
19 run the data center. What is the nature of that  
20 equipment?

21 MR. SPITZKOFF: So some of it is going to be air  
22 conditioning or cooling equipment, water equipment.  
23 Most likely their backup generation is going to be  
24 located out there, things of that nature.

25 CHMN. CHENAL: Thank you.

1 Member Hamway.

2 MEMBER HAMWAY: I think I saw that you're  
3 targeting a LEED gold status. Did I see that on there?

4 MR. SPITZKOFF: So that's the data center  
5 developers. So in this case that would be Stream Data  
6 Centers. APS is not building these data centers. But I  
7 did see that on their video.

8 MEMBER HAMWAY: Okay, all right. So you don't  
9 really know what constitutes a LEED silver versus gold  
10 versus bronze?

11 MR. SPITZKOFF: Personally, I do not.

12 CHMN. CHENAL: Member Woodall.

13 MEMBER WOODALL: Excuse me. With respect to the  
14 video, I don't want to hurt the utility's feelings, but  
15 I didn't see any electrical infrastructure such as  
16 transmission lines or substations. Are they  
17 underground, or are they there but just not depicted in  
18 the video, if you know?

19 MR. SPITZKOFF: So I don't know specifically.  
20 But you preempted my --

21 MEMBER WOODALL: I am sorry.

22 MR. SPITZKOFF: -- point I was going -- about to  
23 get there, to that point. What is depicted in here is a  
24 facility that is 74,000, just about 75,000 square feet.  
25 And within it they have three 10,000 square feet of data

1 hall space in there. And this facility is designed for  
2 7.8 megawatts of critical load.

3 So whether there is a substation there or not,  
4 at 7.8 megawatts, a facility of that size could be fed  
5 from distribution level, which could easily, may easily  
6 be underground feeding into that facility.

7 For a point of reference, the Stream Data  
8 Centers, the existing building on their site is 418,000  
9 square feet, and is capable of supporting 50 megawatts  
10 of critical load just for that one building. And that's  
11 about five times the size of what you see, saw in that  
12 video there.

13 MEMBER WOODALL: Thank you very much. That was  
14 very helpful.

15 MR. SPITZKOFF: My pleasure.

16 CHMN. CHENAL: Mr. Spitzkoff, I thought I heard  
17 earlier in the presentation that the load for the Stream  
18 facility that's planned for this project, Cyclone --

19 MR. DERSTINE: Right.

20 CHMN. CHENAL: -- was on the order of  
21 360 megawatts. So you just discussed a 50 megawatt  
22 Stream facility. So is that different than the one  
23 that's projected for this project?

24 MR. SPITZKOFF: No, Chairman. That is just for  
25 the one existing building. Their full site will

1 encompass numerous buildings. So they have 157 acres on  
2 that site, basically what you have seen in the blue  
3 area. And their spec sheet says with full buildout they  
4 expect 2 million square feet of data center space.

5 CHMN. CHENAL: All right. Thank you.

6 BY MR. DERSTINE:

7 Q. Mr. Spitzkoff, you have given us a little bit of  
8 a look at what a data center is and what it looks like  
9 inside. I guess it raises the question of why they are  
10 moving here. Can you address that a bit.

11 A. (BY MR. SPITZKOFF) Yes. Give the presenters a  
12 second to get the left screen back.

13 Okay. So on the right side of the screen, the  
14 first two bullet points are quotes that I have up here,  
15 one from a Stream Data Centers representative, one from  
16 a Microsoft representative, talking about, you know, why  
17 they are coming to the Phoenix region. And in general,  
18 there is a couple of factors, some of which Mr. Derstine  
19 mentioned earlier.

20 Arizona has created a pro business environment  
21 that has embraced technology and innovative companies,  
22 which also has fostered a strong talent pool.

23 There is almost zero risk of natural disasters;  
24 although, after yesterday they might look at that again.

25 There is strong fiber connectivity to the major

1 markets.

2           There is availability of large scale developable  
3 land. I will just real quick on the left screen sort of  
4 illustrate that. You know, what you see in the orange  
5 and the blue are the two sites here, but you can also  
6 see in the surrounding areas it is agricultural land  
7 that's slated for future industrial/commercial use. And  
8 the west valley has a lot of available developable land,  
9 and that land has access to highly reliable transmission  
10 lines.

11           And we have generally low cost of power.

12           CHMN. CHENAL: Member Woodall.

13           MEMBER WOODALL: Mr. Spitzkoff, I realize this  
14 is not directly relevant to the siting of these  
15 facilities, but are the companies going to pay regular  
16 tariffed rates, or are there special contracts that you  
17 are contemplating? And if it is proprietary or  
18 confidential, you need not answer.

19           MR. SPITZKOFF: I believe they are going to be  
20 under the extra high load factor rate that the  
21 Commission approved I would say within the last year or  
22 year -- or about that time frame.

23           MEMBER WOODALL: Okay. Thank you very much.

24           CHMN. CHENAL: One more question. You can  
25 see -- you are getting the picture, right? We like to

1 interrupt and ask questions.

2 MR. SPITZKOFF: I believe that's probably your  
3 job.

4 CHMN. CHENAL: Okay. So in the slide on the  
5 right, low latency to major markets, I must confess I  
6 don't completely understand what that means.

7 MR. SPITZKOFF: Basically latency is a time  
8 delay in transmission of information over fiber  
9 networks. So it would be very little delay in the data.  
10 So it is basically a speed thing. And it is --  
11 I know, I think it was Mr. Petry here was telling me if  
12 you have children who are gamers or if you yourself are  
13 a gamer, latency is a very big thing for you.

14 CHMN. CHENAL: Thank you.

15 BY MR. DERSTINE:

16 Q. Again, Mr. Spitzkoff, you are having to take on  
17 a role here that's necessarily not your training or your  
18 background in terms of telling us about data centers and  
19 giving us some of the important background information.  
20 I think as part of that we have asked you to look into  
21 whether or not data centers provide any sort of broader  
22 economic benefits to the state and the communities in  
23 which they end up putting their projects. So you have  
24 done some reading, and I think you have compiled some  
25 quotes from folks about the kind of benefits they

1 provide.

2 A. (BY MR. SPITZKOFF) Yes. So on the right  
3 screen, again, I have two quotes. The first quote is  
4 from the mayor of Goodyear. The second quote is from  
5 the mayor of El Mirage.

6 As Mr. Derstine mentioned earlier, we are  
7 working with about five different data center sites, and  
8 one of them is in El Mirage, which is why you see a  
9 quote from the mayor of El Mirage on the screen. And  
10 these quotes sort of outline some of the benefits that  
11 they see for these projects.

12 I am not going to read the quotes, but although  
13 long-term data centers do not directly employ large  
14 numbers of employees, certainly not as large as  
15 manufacturing facilities may, but they have been found  
16 to have fairly significant indirect benefits through the  
17 construction of the facilities. So you will have a  
18 large number of construction jobs, along with a fair  
19 number of permanent high paying tech jobs once they are  
20 up and running.

21 There is also an impact on the supply chain  
22 sales for the local economy. There is certainly  
23 property tax revenues. And overall, these projects end  
24 up investing millions of dollars into the local economy.

25 And now on the right screen, here is a third

1 quote, from the governor of Arizona. And really the  
2 theme of these three quotes -- or actually these three  
3 quotes were from the Microsoft announcement or kickoff  
4 event and specifically relate to that project. But the  
5 theme of creating a business environment is what you see  
6 with these projects here. So, you know, one of the  
7 other effects is it becomes an environment that attracts  
8 other tech companies to the area also.

9 And with the Stream project -- Microsoft was the  
10 first one to purchase, acquire their land. Once they  
11 did that, you know, we have noticed the other data  
12 centers that have also started looking in the area. So  
13 it sort of creates an environment where it attracts,  
14 business attracts other business.

15 Q. Thank you for that.

16 With the background on data centers, let's move  
17 to a separate topic, and actually the --

18 CHMN. CHENAL: Let me interrupt you,  
19 Mr. Derstine. We have gone about 90 minutes. We like  
20 to take breaks for the benefit of everybody, and  
21 especially the court reporter. So this seems like a  
22 logical breakpoint for a 15-minute break. So let's take  
23 that break and we will resume in 15 minutes. Thank you.

24 MR. DERSTINE: Thank you.

25 (A recess ensued from 2:29 p.m. to 2:57 p.m.)

1 CHMN. CHENAL: All right. This is the time for  
2 a resumption of the hearing. And I think we last left  
3 Mr. Spitzkoff, and, I think, Mr. Derstine, you were  
4 going to get into a new area. So unless there is  
5 anything we need to discuss before we start, why don't  
6 you please proceed.

7 MR. DERSTINE: All right. Thank you,  
8 Mr. Chairman. I think there are a couple things that we  
9 want to touch on before we move on with this next  
10 chapter in our case presentation. At the break  
11 Mr. Spitzkoff indicated to me that there were, I think,  
12 two corrections he wanted, or clarifications for the  
13 record from the prior testimony.

14 MR. SPITZKOFF: Sure. First one I indicated the  
15 Cholla power plant was somewhere around St. Joseph, and  
16 it is actually Joseph City. It was close.

17 And just to clarify, Mr. Chairman, I believe it  
18 was you who asked me about the coal power plants. And,  
19 you know, when I was talking about the Navajo Generating  
20 Station I just want to clarify APS is a joint owner, but  
21 we are not the operator of the Navajo power plant.

22 CHMN. CHENAL: Thank you. It wasn't meant to be  
23 a trick question. But at some point I am going to ask,  
24 maybe it is relevant to need, maybe it isn't, but where  
25 the power is going to come from to basically replace the

1 power that's going to be lost from these generating  
2 station decommissions.

3 MR. DERSTINE: All right.

4 CHMN. CHENAL: Member Noland.

5 MEMBER NOLAND: Mr. Chairman, I had a question  
6 with regard to these projects. Do you know if they are  
7 going to be including any solar for ancillary  
8 operations, like offices or whatever, on either one of  
9 these projects?

10 MR. SPITZKOFF: So I don't know if they are  
11 going to include any solar on-site. I am aware of  
12 Microsoft's, part of -- their announcement was part of  
13 that was an agreement they have, I believe, with First  
14 Solar energy to develop a power plant out by the Palo  
15 Verde hub area.

16 MEMBER NOLAND: And then the other thing that  
17 came to mind, do you know the percentage of their power  
18 usage that goes to air conditioning as compared to the  
19 operation of the servers?

20 MR. SPITZKOFF: So I do not know that. What I  
21 did find in my research on data centers these last few  
22 weeks, almost every site is different. And I don't know  
23 how they are going to develop this site, so I don't know  
24 that answer.

25 MEMBER NOLAND: Okay. Thank you.

1 CHMN. CHENAL: Member Haenichen.

2 MEMBER HAENICHEN: Thank you, Mr. Chairman.

3 I have been doing this for quite a number of  
4 years now, and I am always amazed at how a utility can  
5 come up with some huge new load like this -- I would  
6 consider this a major load, these two combined -- and  
7 just throw it on an existing line and there is all the  
8 capacity there to take it.

9 Last week we did a case, and I always ask this  
10 question and I asked it. And they had a really  
11 believable answer because they are talking about it was  
12 going to be because of decommissioning of coal plants,  
13 and that would open up space on the line. Is the same  
14 thing true here? How come you have no problem dumping  
15 all that energy in there?

16 MR. SPITZKOFF: So that's actually a pretty  
17 complicated question, and an even more complicated  
18 response.

19 MEMBER HAENICHEN: Good.

20 MR. SPITZKOFF: I will try my best.

21 So the line that we are connecting into, the  
22 Palo Verde -- sorry, the Palm Valley to Rudd 230 line,  
23 the thermal rating of that line is, I think it is  
24 1200 megawatts, or in that range. And it is really  
25 given the nature of the networked system and how a

1 network system operates.

2 So one factor is the Rudd substation is one of  
3 the major sources. And that's the import point for a  
4 lot of power into the valley. So from the Rudd  
5 substation over to these two loads, you know, you are  
6 traversing that 1200 megawatt capable line.

7 Then it goes to the other site, the Palm Valley  
8 substation. That also has a number of other 230kV lines  
9 into it which are also connected to other sources. So  
10 what happens when you add load like this, you sort of  
11 redistribute the flows to the surrounding network.

12 I hope that helps.

13 MEMBER HAENICHEN: Well, it helps. But  
14 utilities are required to have a certain amount of  
15 overcapacity in the system for contingencies and that  
16 kind of thing. But it just seems like there is more  
17 than is needed as these loads continue to be dumped onto  
18 the existing infrastructure.

19 MR. SPITZKOFF: I would characterize it a little  
20 different. And I think it is more the benefit of  
21 operating in a network system. So if we put these lines  
22 into this, or these new loads into this line, and the  
23 studies, the reliability studies that we perform show  
24 that we can do that, and what will happen for  
25 contingencies, the other lines will pick up enough of

1 the other load on a proportionate basis.

2 So, you know, you are correct there. You know,  
3 you do need a little bit more capacity, you know, to  
4 handle contingencies. And, you know, that's, you know,  
5 what we are seeing here, is the network as a whole can  
6 absorb that load. And as we move out into the future  
7 and other loads are added and, you know, the system  
8 grows over time, you know, there are going to be  
9 facilities that are going to have to be added just like  
10 there have been in, you know, some of the other projects  
11 in our 10-year plan also.

12 MEMBER HAENICHEN: Thank you.

13 CHMN. CHENAL: Let me follow up with a question  
14 then. These two data centers are going to add about  
15 600 megawatts of load. And based on your answer, that  
16 can be, you know, diffused in the area to kind of  
17 accommodate that 600 megawatts.

18 But back to Member Haenichen's question, at what  
19 point would the network not be able to handle a load?  
20 What would be that load that the network, you would say  
21 600, okay, we can handle, but at what point does a  
22 network not have the capacity to handle?

23 MR. SPITZKOFF: So for specifically this part of  
24 the network, you know, we didn't look at finding what  
25 that number is. We know we can accommodate the

1 620 megawatts. Whether it is up to 700 or 800, we  
2 didn't keep on going up because we didn't have that  
3 request. And that answer would be different in  
4 different parts of the network. So I don't have a  
5 specific number for you. But it is more than  
6 620 megawatts.

7 CHMN. CHENAL: Can you give like a wild guess as  
8 to what that number would be?

9 MR. SPITZKOFF: For this area, I would say maybe  
10 pushing 800 to a thousand megawatts.

11 CHMN. CHENAL: Okay. All right. So this 600 is  
12 getting, you know, it is taking quite a fair percentage  
13 of the available capacity then.

14 MR. SPITZKOFF: Well, and that's assuming the  
15 rest of the system is also staying static, you know.

16 CHMN. CHENAL: All right. Thank you very much.

17 BY MR. DERSTINE:

18 Q. Mr. Spitzkoff, I think also before we took our  
19 break Member Hamway had a question about LEED  
20 certification. Were you able to address that?

21 A. (BY MR. SPITZKOFF) Yes. So for the Microsoft  
22 site I can address that. They are looking to achieve  
23 LEED gold status. I still don't know exactly what that  
24 means, but that's what they are going for.

25 MR. DERSTINE: I understand that we will, I

1 think we will have a representative of Microsoft for  
2 public comment, and maybe that gentleman can give us a  
3 little more information on Microsoft's LEED  
4 certification and what that means, Member Hamway.

5 MEMBER HAMWAY: Okay. Thank you.

6 BY MR. DERSTINE:

7 Q. Mr. Spitzkoff, you can see on the screen that  
8 the next chapter in our case presentation addresses  
9 purpose, need, and project design. Let's start by just  
10 having you describe the purpose of the project.

11 A. (BY MR. SPITZKOFF) Yes. The purpose of the  
12 project is to serve these two new customers.

13 Q. And given that basic purpose, from my opening  
14 you heard me indicate that, although the purpose is  
15 fairly straightforward, the need is a little more  
16 complicated, given the nature of the data centers and  
17 what you talked about in terms of the load of these two  
18 data centers. Why don't you talk through the need  
19 issues and how that impacts our project.

20 A. (BY MR. SPITZKOFF) Yes. So the need is to  
21 extend our 230kV system to the site of these two  
22 customers. Due to their high energy demands, the need  
23 is to serve it off of 230kV voltage and take them out of  
24 our 69kV network, not serve it on a 69 system. You  
25 know, we have already talked about the Wildcat site is

1 expecting at full buildout 270 megawatts of load, the  
2 Cyclone site up to 350 megawatts at full buildout.

3           So for a little context, and to give you an idea  
4 of, you know, how much of a high load increase this is  
5 with data centers, the general Goodyear area -- and  
6 which was represented a little bit earlier in our 69kV  
7 system map -- is expected to peak this summer at  
8 467 megawatts. So that's 467 megawatts for that whole  
9 Goodyear area compared to 620 megawatts with these two  
10 customers.

11           And that 467 is spread out over a larger area,  
12 and this 620 megawatts is, you know, a much denser load,  
13 just in these two specific spots. So that highlights  
14 the need to serve it from our 230kV network and not out  
15 of our 69kV network, which is for normal general load  
16 serving capability for regular residential and business  
17 service.

18       Q.       So we have pulled up the map that you referenced  
19 earlier in kind of the west valley, Goodyear area  
20 transmission system. In terms of you indicated you can  
21 serve -- you can't serve from the 69kV system, but I see  
22 there in the bullet point you have initial service can  
23 be handled from the 69kV system, can you talk about that  
24 a little bit more.

25       A.       (BY MR. SPITZKOFF) Yes. Let me orient you back

1 on the left side of the screen. This is the Phoenix  
2 Goodyear Airport. So right in this area is where the  
3 two projects are. So we have a 69kV line that's  
4 existing. That's just on the south side of Broadway  
5 Road. That 69kV line will provide the initial load  
6 service for the site.

7 You know, all 270, 350 megawatts doesn't show up  
8 on day one. So they build into that. So from our 69kV  
9 line we can serve 50 megawatts at each site. But once  
10 they grow to over that 50 megawatt threshold, that's  
11 when we have to make sure and transition them over to  
12 our 230kV system, take them out of the 69kV network, and  
13 have their source at the 230kV.

14 Q. So it is kind of that timing issue of at the  
15 point in time that Microsoft and Stream are developing  
16 their load exceeds the 50 megawatts, we then need to  
17 have this project in place in order to serve that  
18 increased load, is that right?

19 A. (BY MR. SPITZKOFF) That's correct.

20 CHMN. CHENAL: And what is the timing for that?

21 MR. SPITZKOFF: So right now the expected timing  
22 for the Microsoft site is near the end of 2021. And for  
23 Stream, the projections, they have put it somewhere in  
24 2022.

25 CHMN. CHENAL: Thank you.

1 BY MR. DERSTINE:

2 Q. And using the map on the left again, point us to  
3 where that 230 Palm Valley-Rudd line is in relation to  
4 the two data center campuses or projects.

5 A. (BY MR. SPITZKOFF) Yes. So again, here is the  
6 Phoenix Goodyear Airport. So the two sites are just  
7 south, sort of in this area here. And then this is the  
8 Palm Valley to Rudd 230kV line. So it is in this area.  
9 It is the northernmost transmission line in this  
10 corridor. It is about a half a mile or a little bit  
11 less south of Broadway Road.

12 Q. Okay. And so the purpose and need is to get  
13 from the Palm Valley-Rudd 230kV line to these data  
14 center campuses and interconnect the two substations,  
15 TS-15 and TS-18, into that line. That's generally the  
16 purpose and need of this project, right?

17 A. (BY MR. SPITZKOFF) Yes.

18 Q. Okay. So let's talk and have you give your view  
19 on the project design and the routes that we have  
20 brought forward in order to serve and satisfy the need.

21 CHMN. CHENAL: Let me ask a question first.

22 MR. DERSTINE: Yeah.

23 CHMN. CHENAL: Just kind of occurred to me, you  
24 know, in the middle of summer when you turn on the air  
25 conditioner and your peak power, you are kind of adding

1 to that peak load there. I mean this project is going  
2 to create that peak 24/7 for 365 days a year.

3 So I guess it is just out of curiosity, but, I  
4 mean, are these two facilities going to be paying like  
5 peak rates versus an average, you know, commercial  
6 customer, or is it a special, special case, a special  
7 pricing?

8 MR. SPITZKOFF: So I believe they are going to  
9 go on the extra high load factor rate, and I do not  
10 believe there is like a time-of-use kind of factor that  
11 I believe is what you are alluding to.

12 CHMN. CHENAL: Yeah. They don't get to just use  
13 it from 9:00 at night and 4:00 in the morning. They are  
14 24/7.

15 MR. SPITZKOFF: That's correct.

16 CHMN. CHENAL: But their load, if it exceeds the  
17 City of Goodyear today, I mean that would seem to be  
18 peak rate pricing, if it were a retail customer.

19 MR. SPITZKOFF: I am not sure I necessarily  
20 understand your question.

21 CHMN. CHENAL: Well, maybe I am not  
22 understanding it myself. But yeah, Member Haenichen  
23 will explain it, well, explain what I am trying to ask.

24 MEMBER HAENICHEN: In actual fact these are  
25 dream type customers for the utility, because they are

1 not a peak user, they are an all time steady user, and  
2 they can depend on that load being there. So in the  
3 middle of the night, if they were having to pay a peak  
4 load in the daytime, they should get a big kickback at  
5 night. So that kind of averages out.

6 CHMN. CHENAL: Okay. Thank you.

7 MR. DERSTINE: It is a good question. And  
8 Member Haenichen is correct. And I think one of the --  
9 it is one of the unique characteristics about these data  
10 center customers, is that flat load profile that  
11 Mr. Spitzkoff referred to.

12 So, you know, I think as members of this  
13 Committee know, that during the day we have oftentimes  
14 overgeneration. We have so many renewable generation  
15 assets on the system, whether it is distributed  
16 generation or utility scale, that you have what we refer  
17 to as the duck curve. We have this excess  
18 overgeneration during the day. But at the peak,  
19 utilities like Arizona Public Service Company have to  
20 figure out and marshal those generation assets in order  
21 to fill those resources when everyone comes home and  
22 turns on the oven and starts the dryer toward the end  
23 the day, which I think is generally where APS  
24 experiences its peak load.

25 So to Member Haenichen's point, you have got

1 these customers that, you know, have a flat load  
2 profile, and they are soaking up some of that  
3 overgeneration during the times of the day when there is  
4 excess power on the system largely from renewables.

5 But to your point, Mr. Chairman, this load will  
6 increase the peak and APS will have to serve it.

7 CHMN. CHENAL: I mean double the peak.

8 MR. DERSTINE: That's right. Well, certainly  
9 double --

10 CHMN. CHENAL: In the Goodyear area.

11 MR. DERSTINE: -- the peak in the Goodyear area.

12 CHMN. CHENAL: Yes.

13 Member Hamway.

14 MEMBER HAMWAY: So how many years -- I know you  
15 said 2021, '21 and '22 to get the power. So when are  
16 they going to be at full buildout, or when is their  
17 estimated point at full buildout? And probably that is  
18 determined by how much power and server things they can  
19 sell to other customers, right?

20 MR. SPITZKOFF: So I think for the Stream site  
21 their business model is what we call a collocation  
22 facility, or it is a little bit different. They build,  
23 develop a building, sell it to an enterprise user or  
24 some other customers, then develop the next building,  
25 et cetera.

1 I would believe the Microsoft project would be a  
2 little bit different. It is, my guess or my assumption  
3 is it is an enterprise use for their own needs, you  
4 know, internal to the overall Microsoft needs.

5 MEMBER HAMWAY: Okay. So that really didn't  
6 still answer full buildout. I mean, are we talking 10  
7 years? And I know you probably can't answer. That's a  
8 business model for those two companies.

9 MR. SPITZKOFF: Yes, so you are correct, that is  
10 a business model for those companies.

11 I think there was also another part to your  
12 question where you stated it depends on the power that  
13 we can provide. I would posit that once the 230  
14 facilities are constructed, we would be able to provide  
15 their full buildout at a faster pace than they would be  
16 be able to move equipment and build their buildings.

17 MEMBER HAMWAY: Okay, thank you.

18 BY MR. DERSTINE:

19 Q. I think we are going to turn now to a bit more  
20 on the project design, the actual routes that we have  
21 brought forward in order to serve the need, if you can  
22 talk about those.

23 A. (BY MR. SPITZKOFF) Sure. So all three  
24 alternatives, the preferred route, Alternative 1, and  
25 Alternative 2, meet the needs of the project. They look

1 a little bit different visually from the routings, but  
2 electrically they are basically all the same. They are  
3 basically all equivalent.

4 They would create -- they would take the  
5 existing line, the Palm Valley to Rudd 230kV line, cut  
6 in the two new substations, and you would end up with a  
7 new Palm Valley to TS-15, a TS-15 to TS-18, and a TS-18  
8 to Rudd 230 line. And you would end up with that in all  
9 three alternatives.

10 And I will just quickly walk through. Palm  
11 Valley is off to the west of this picture here, so the  
12 230 line would come in, would hit this Link 1, go into  
13 TS-15, across to 18, back down and out to Rudd.

14 I will point out the existing 230 conductors  
15 that are between those connection points would no longer  
16 be used. The route for the power would be to the new  
17 point of connection up to the two substations and back  
18 down.

19 And you can see it would be the same thing for  
20 Alternative 1. It would hit the point of  
21 interconnection, go to the two substations, and then  
22 back down. And even Alternative 2, with the additional  
23 ups and downs, you would still come from the Palm Valley  
24 substation, hit route 1, you would come back down to the  
25 original line, back over, back up to the new sub and

1 then back down and out to Rudd. And in this case, you  
2 would no longer be using the existing 230 between these  
3 two points. You would use the one between these two,  
4 and then we would no longer use the one between those  
5 two points.

6 But at the end of the day, they are all Palm  
7 Valley to TS-15 to TS-18 to Rudd. And from an  
8 electrical standpoint, the minimal additional distance  
9 between the alternatives from an impedance standpoint  
10 for 230kV lines is pretty insignificant in this case.

11 CHMN. CHENAL: Member Woodall.

12 MEMBER WOODALL: I am sorry. I may have been  
13 thinking of another case, but did you indicate that  
14 there is going to be some transportation improvements in  
15 this area? And if so, could you depict them. I mean,  
16 could you show us with your pointer where they are.

17 I am trying to figure out if the third one is  
18 going to require multiple crossings of any  
19 transportation corridor that might be in play.

20 MR. SPITZKOFF: So we definitely have slides  
21 later.

22 MEMBER WOODALL: Okay.

23 MR. SPITZKOFF: I think Mr. Petry, maybe even  
24 Mr. Larsen.

25 But just quickly, there is a proposed State

1 Route 30, I believe is what it is. And that would be  
2 traversing across from the west basically across this  
3 area and down through there. We will get a better sense  
4 and there is a better slide a little bit later on.

5 MEMBER WOODALL: I will wait for him to present  
6 his story for me. Thank you so much.

7 MR. SPITZKOFF: You are welcome.

8 CHMN. CHENAL: Member Gentles.

9 MEMBER GENTLES: So just help me understand why  
10 Alternative Route No. 2 has so many zig-zags in it as  
11 opposed to the preferred route, and why that Alternative  
12 Route No. 2 is still in play based on the way it looks.

13 MR. SPITZKOFF: Certainly. So Alternative Route  
14 No. 2 is really where we start from with these projects.  
15 We had the first customer here, and we are like, okay,  
16 we can go up and back to the existing line.

17 And then the Cyclone project came out, and okay,  
18 we can go up and back to the existing line. It is still  
19 in play and was in play for awhile because we were  
20 working through with Microsoft predominantly on what  
21 their development looked like on their lands, where  
22 their buildings were going to be, the retention areas.  
23 And we did not know if we would be able to traverse  
24 across their land. So we had the options that came back  
25 to the existing line.

1 MEMBER GENTLES: Okay.

2 CHMN. CHENAL: Member Woodall.

3 MEMBER WOODALL: So the applicant has included  
4 this as an alternative route, which I assume means that,  
5 if for some reason we select it, you are willing to  
6 build it in that fashion, is that correct?

7 MR. SPITZKOFF: That is correct.

8 MEMBER WOODALL: Thank you.

9 CHMN. CHENAL: Member Gentles.

10 MEMBER GENTLES: So is it safe to say that the  
11 preferred route is a less expensive option than the  
12 Alternative Route No. 2?

13 MR. SPITZKOFF: I believe so, yes.

14 MEMBER GENTLES: Okay.

15 MR. DERSTINE: We will get to, Mr. Chairman,  
16 Member Gentles, we will get to the cost numbers, but I  
17 think it is roughly \$2 million less.

18 MR. SPITZKOFF: And so while we are also talking  
19 about the differences of the routes, another difference  
20 with Alternative Route 2 compared to Alternative Route 1  
21 and the preferred route, this configuration we would  
22 have to come across the Western Area Power  
23 Administration's 230 lines and our 69 line two  
24 additional times. So with the preferred and the  
25 alternate route coming across Broadway Road, it would be

1 one crossing of those lines, and then when we come back  
2 to the existing line would be a second crossing. With  
3 Alternative 2 we would be crossing them a total of four  
4 times instead of two times.

5 CHMN. CHENAL: And just one more question,  
6 Mr. Spitzkoff. For your preferred route, what is the  
7 total length of the line?

8 MR. SPITZKOFF: One second. We have that.

9 CHMN. CHENAL: Sure. And I think just for  
10 purposes of the CEC, I mean whatever route we choose we  
11 need to make sure we include the length in the CEC.

12 MR. SPITZKOFF: Yes. So Mr. Larsen has it in  
13 his slides. But the preferred route is 1.45 miles,  
14 Alternative Route 1 is 1.65, and Alternative 2 is 2.2.  
15 And if we use the sub route, it is 1.89 miles. And  
16 there is a table in Mr. Larsen's slides with that.

17 CHMN. CHENAL: All right. And just a note to  
18 the counsel for the applicant, I think we need to  
19 include the length of the line in the CEC. I am not  
20 sure I saw it in there. Maybe we just didn't have it in  
21 because we didn't know the preferred route. I may be  
22 mistaken, but I want to make sure we include the length  
23 in whatever route we select when we discuss it.

24 MR. DERSTINE: Will do.

25 BY MR. DERSTINE:

1 Q. Mr. Spitzkoff, I think your last sub bullet  
2 there on the project design slide notes that no load  
3 loss for single contingencies. I think that goes to the  
4 question that Member Woodall raised. But can you talk  
5 about that and what that means.

6 A. (BY MR. SPITZKOFF) Yes. So all of these  
7 alternatives meet the reliability goals that we have,  
8 and we could withstand the loss of any one element  
9 without the loss of load.

10 Q. And all three of them satisfy that?

11 A. (BY MR. SPITZKOFF) Yes, all three of them.

12 Q. And it wouldn't be the case that Alternative  
13 Route 2 is more robust or provides greater reliability  
14 because it has so many -- has the additional lines and  
15 the line crossings that you referred to?

16 A. (BY MR. SPITZKOFF) It would not be greater  
17 reliability. There would be slightly diminished  
18 reliability, actually, with additional line miles in  
19 this fashion and the two increased crossings. But it is  
20 all within the same general reliability factor.

21 Q. They all satisfy the N-1 contingency?

22 A. (BY MR. SPITZKOFF) Yes.

23 Q. And you mentioned the line crossings. I don't  
24 think that's something that we have touched on yet, and  
25 it is probably an important thing, since you mentioned

1 it, to explain to the Committee at this point.

2 So where is this WAPA line and the crossings  
3 that you are talking about? That may raise some  
4 concerns, depending on which route is selected.

5 A. (BY MR. SPITZKOFF) Sure. It may be easier if I  
6 could ask the left slides to go up by, I believe, two.  
7 Yeah, at least that's a little bit bigger picture there.

8 So here is the project, the two project areas.  
9 This is Broadway Road down here. You can see the line  
10 in blue that comes across. That's two WAPA 230kV lines.  
11 WAPA is Western Area Power Administration. Those lines  
12 are on a single double-circuit set of towers. They are  
13 on the north side of Broadway Road and they are actually  
14 on the south side of the property for both these  
15 projects.

16 There is also, you can see on here, a green  
17 line, which as you go to the left may be hidden a little  
18 by the blue, but you can see it sort of emerging as you  
19 go east a little and then up. That's an APS 69kV line  
20 that's existing. That line is on the south side of  
21 Broadway Road. So those are two lines, as we go from  
22 the existing corridor here up and down to the sites, we  
23 have to cross those lines.

24 CHMN. CHENAL: Member Haenichen.

25 MEMBER HAENICHEN: It seems to me in reading the

1 application that the structures are going to be double  
2 circuit capable, is that correct?

3 MR. SPITZKOFF: The monopoles will be double  
4 circuit capable. We are not planning on adding a second  
5 circuit. Just it is generally our standard line design  
6 now to -- our structures are double circuit capable just  
7 because it is also a more robust line design for the  
8 structures. And there are --

9 MEMBER HAENICHEN: But it has got to cost more  
10 per infrastructure.

11 MR. SPITZKOFF: It does cost more, but it is  
12 pretty insignificant additional cost.

13 MEMBER HAENICHEN: Yes. These lines are pretty  
14 much dedicated lines. I am talking about the ones you  
15 are going to build. They are never going to require the  
16 second circuit, right?

17 MR. SPITZKOFF: I never say never, but it is  
18 highly unlikely.

19 MEMBER HAENICHEN: Thank you.

20 BY MR. DERSTINE:

21 Q. And to your point, you said that the monopoles  
22 will be double circuit capable. However, a number of  
23 structures are H-frame structures, and there is not a  
24 way to build those on double circuit, right?

25 A. (BY MR. SPITZKOFF) No, not these H-frames.

1 Q. Okay. Any other features about the design, the  
2 electrical system that you think is important to point  
3 out for the Committee?

4 A. (BY MR. SPITZKOFF) I think I covered everything  
5 I wanted.

6 Q. Okay. Well, I think you are done for the  
7 moment. Our next chapter is going to hand off to  
8 Mr. Larsen.

9 Mr. Larsen, for this portion of our case  
10 presentation we are going to have you cover the project  
11 development, kind of the steps involved in bringing this  
12 project forward to the point that we are here today,  
13 have you cover the routes, how those routes came to be,  
14 and some of the key features of the routes, and then the  
15 corridor we will be asking for in order for the  
16 placement of the, of the project once we get to final  
17 design.

18 Let's start with just kind of give us an  
19 overview of kind of the steps that were involved from  
20 the early concept, that is the communications with  
21 Microsoft, understand where their project is, and we  
22 have the request to provide service, and kind of how you  
23 walked through and worked through the process of  
24 bringing this project forward in the application.

25 A. (BY MR. LARSEN) Okay. Yes. And as

1 Mr. Spitzkoff has said, obviously it starts with the  
2 need to serve these customers.

3 One of the first things that we do is identify  
4 preliminary links that would connect into the existing  
5 line and serve these customers, and then also determine  
6 the preliminary study area, which we use a pretty big  
7 buffer around all the alternatives.

8 But we take these preliminary links and then go  
9 through a public process, stakeholder outreach, and we  
10 refine those links and eliminate some, change some of  
11 them slightly based on comments or feedback that we have  
12 received. And then we combine those links, if you will,  
13 into separate routes, and in this case into the three  
14 routes that we are carrying forward today. And then  
15 also, from there, we select our preferred alternative.

16 Q. Thank you.

17 Let me have you talk a bit about those first two  
18 bullets, your preliminary study area and your  
19 preliminary links. Can you show us those.

20 A. (BY MR. LARSEN) Yes. I will start out here  
21 again with the map on the left. You will see these  
22 dashed blue lines, a number of them going north and  
23 south, east and west along the Broadway alignment  
24 roughly a little bit on the Litchfield Road alignment  
25 right here, and also continuing to the east along

1 Broadway Road.

2 All of these links would connect to the Palm  
3 Valley-Rudd line down on the south, and even the one  
4 going to the east would connect back into the same line,  
5 other than it would go a lot further to the east.

6 We developed the study area, which is this, the  
7 dashed dark line, kind of the odd shaped elephant in the  
8 room if you want. And this is based on a two-mile  
9 buffer off of any of these alternatives and the project  
10 sites.

11 And from this preliminary study area, that  
12 determines where we come up with our mailing list, a  
13 list of all the residences, property owners, again key  
14 stakeholders such as City of Goodyear, Goodyear Airport,  
15 ADOT, City of Avondale. And again, we then mail to this  
16 entire area as well as hold separate meetings with some  
17 of the stakeholders, and then received input back from  
18 them to further refine the links to eliminate some and  
19 then again refine.

20 I do want to just point out here real quick on  
21 this first one, the preliminary link, all of the routes  
22 were shown east, west along Broadway because we didn't  
23 believe there was adequate space to go onto the  
24 Microsoft property. So that's kind of how we got to the  
25 preliminary links.

1 Q. All right. Thank you.

2 I just want to make sure I understand it. So  
3 this irregular shape that was the preliminary study area  
4 was largely driven by the fact that you had or examined  
5 and analyzed an interconnection point for the Palm  
6 Valley-Rudd line to the east. That's that red triangle  
7 there on the eastern side, or the right side of the map,  
8 is that right?

9 A. (BY MR. LARSEN) That's correct. This is the  
10 Rudd substation. And yes, this was in our preliminary  
11 links. And throughout the public process we determined  
12 the City of Avondale was opposed to that, as well as a  
13 lot of the property owners. And there are also some  
14 home developers over in this area.

15 Q. Okay.

16 A. (BY MR. LARSEN) So that was, as you will see in  
17 the next screen, that that was one of the preliminary  
18 links that was removed.

19 Q. Okay. So this preliminary study area and these  
20 preliminary links, that's what went out to residents  
21 within that large ringed area, and stakeholders and  
22 affected jurisdictions. They received this map as well  
23 as notice of the open house and information about this  
24 project. And this preliminary study was used as kind of  
25 your initial outreach for the project. Is that right?

1 A. (BY MR. LARSEN) That's correct. And I should  
2 have mentioned that. Thank you for bringing that up.

3 Yes, this was mailed out to over 13,000 people  
4 who were on the mailing list. And we invited them to a  
5 public open house where they could learn about the  
6 project, provide input, provide them with our website,  
7 our project phone line, our project emails, and the  
8 numerous ways that they could provide comments.

9 Q. And we are going to dig into the public  
10 engagement process and cover that in greater depth, but  
11 for purposes of understanding the development of the  
12 project, this is the information that went out and then,  
13 I think what I heard you say is, received feedback from  
14 stakeholders as well as residents that then prompted APS  
15 to then eliminate that eastern interconnection option  
16 and those eastern links, and that got us to kind of our  
17 final study area, is that right?

18 A. (BY MR. LARSEN) That's correct.

19 Q. So let's take a look at the next stage of the  
20 project development and the refined study area. Tell us  
21 what we are looking at here.

22 A. (BY MR. LARSEN) Here you will notice that the  
23 study area is slightly smaller, again, because we did  
24 eliminate the link that came over to the east. I do  
25 want to point out that to all the mailings we kept the

1 preliminary siting study area, so we mailed to the full  
2 study area even later on.

3 Q. Let me stop you there. So what you are saying  
4 is you used the preliminary study area for your  
5 mailings, even though we had later at a subsequent stage  
6 refined it down to the smaller study area by eliminating  
7 the eastern interconnection point, is that right?

8 A. (BY MR. LARSEN) That's correct. And really  
9 this was a more detailed study of the remaining links  
10 and, when we were refining them and working them into  
11 alternatives, just a more detailed look in this smaller  
12 study area. But other than that, the larger study area  
13 was still used for the mailings.

14 Q. Okay. And so this refined study area dropped  
15 out some of those early links, and it appears that,  
16 what, what you have now in the project study area are  
17 the routes and the links that are -- that run south of  
18 the two, the Wildcat and the Cyclone, projects, is that  
19 right?

20 A. (BY MR. LARSEN) That's correct. And I did just  
21 want to point out that during the refinement process, we  
22 did meet with Microsoft and were able to find space  
23 available on their property for the tie between the two  
24 substations. That was part of the public input we  
25 received, was to put it north onto the customers and off

1 the private landowners to the south of Broadway. And we  
2 kind of heard the same thing over here on Litchfield,  
3 and removed a line or preliminary link due to some of  
4 the residents that came out and wanted us to move it  
5 further west.

6 Q. Okay.

7 A. (BY MR. LARSEN) So we did take these and then  
8 developed them into the three distinct routes that we  
9 are carrying forward today.

10 Q. All right. So let's talk about those. Show us,  
11 give us an overview of those three routes, the preferred  
12 and the two alternatives.

13 A. (BY MR. LARSEN) Okay. Again, here, you have  
14 seen this before. And it is also up on one side of your  
15 placemat. And we will talk in a little more detail  
16 about each one of these. I will thank Mr. Spitzkoff for  
17 already giving you a very good idea of what each one is.  
18 It makes it a little simpler for me. So thank you.

19 Anyway, so the first preferred alternative,  
20 again, it does come up from this, the point where this  
21 Palm Valley-Rudd line jogs to the north. We  
22 interconnect there and go almost directly north, and  
23 then angle over into the Microsoft -- or the Cyclone  
24 project, also Microsoft, now I am saying it wrong,  
25 Wildcat site or the Microsoft site. We remained on

1 their property coming over into the Cyclone substation.  
2 And then we came almost directly south and tied into the  
3 existing structure down here on the Palm Valley line.

4 For the Alternate Route 1, again, the first  
5 pieces are all the same. The difference is we do come  
6 to the south and then build a small section along  
7 Broadway Road to the east, and then down the eastern  
8 property line and back into the Rudd line.

9 And again, on Alternative 2, this was kind of  
10 the way the project started. Originally we considered  
11 potentially even doing two separate CECs, one coming up  
12 and back down for the Wildcat site, and then another CEC  
13 for the project coming up and out of the Cyclone site.  
14 But as this project evolved, we were able to combine  
15 these into one and build it all at one time rather than  
16 in two different phases.

17 Q. I think in a couple additional slides that kind  
18 of highlights the key features of the preferred and the  
19 two alternative routes. Can you cover those.

20 A. (BY MR. LARSEN) Yes. We touched briefly on  
21 this, but the preferred route is 1.45 miles. 54 percent  
22 of it is on customers' data center land, again, was what  
23 we heard from the public. And we were able to get that  
24 piece there. 44 percent is on private land to the  
25 south. And 2 percent of the line crosses over the

1 Broadway Road, which is Goodyear land.

2 CHMN. CHENAL: Mr. Spitzkoff, I had a question.  
3 I would like to know the land ownership. If we could  
4 see the alternative, the preferred and the  
5 Alternative 1. Is there a way to put that up on the  
6 screen again?

7 All right. Preferred goes straight down the  
8 middle. It is at segment 7. And then on Alternative 2,  
9 you have the southern link, Link 9 is further to the  
10 east. So who owns, I mean, the lot, or the land there?

11 It seems just from looking at the diagrams that  
12 one link, 7, kind of looks like it bisects the land,  
13 whereas Link 10, Link 10 on the preferred one seems like  
14 it is, I don't know, on the eastern side or runs down a  
15 road or street or something. And I just can't tell very  
16 well from looking at the diagrams.

17 But, you know, I just, you know, want to make  
18 sure that we are not putting the line down the middle of  
19 someone's farmland and we haven't heard from that  
20 person, if I am making any sense.

21 MR. DERSTINE: Mr. Chairman and Mr. Larsen, if I  
22 could, we will use the resources of our panel. Since  
23 Mr. Petry did the land use analysis and knows those  
24 issues pretty well, maybe he can speak to that issue and  
25 talk about land ownership, as well as kind of what sort

1 of impacts Link 7 has in comparison to Link 10.

2 MR. PETRY: Certainly. And if we could,  
3 progress to just the preferred route slide for a moment.

4 So, Mr. Chairman, you correctly identified that  
5 within that area south of the Wildcat and Cyclone data  
6 center sites there are a few landowners, but the bulk of  
7 agricultural land there is under one owner. And Link 1  
8 as shown on the preferred route, as well as all routes,  
9 is on the western boundary of that landowner's parcel.

10 Link 7 as identified on the preferred route does  
11 also follow an agricultural field row and road, but it  
12 does bisect that parcel of land. That is one of the  
13 reasons we identified Alternative Route 1. And if we  
14 could progress to that slide, please, you correctly  
15 identified that Link 9 and 10 would be moved to the  
16 perimeter of that particular parcel and would follow  
17 some of the existing roads there as well.

18 CHMN. CHENAL: So first question I have -- and I  
19 don't know, we have a few questions probably -- is:  
20 Does the landowner where Link, get the links right, 7  
21 bisects -- I use the word bisects -- that property, is  
22 that landowner agreeable to the preferred route?

23 MR. SPITZKOFF: So we have been talking with the  
24 landowner a number of occasions. You know, they are  
25 supportive of both the preferred and alternative. We

1 are still working with that landowner, and at the end of  
2 the day, which would be sort of the best route for what  
3 their future use and current uses are. You know, there  
4 are benefits to being on the western edge, not bisecting  
5 it, but there is also some challenges to Link 9 and  
6 Link 10, you know, that we are talking with the  
7 landowner about.

8 CHMN. CHENAL: But if we go with your  
9 recommendation, the applicant's recommendation, and  
10 choose, were we to issue a CEC, your preferred route,  
11 and you are in discussions with the landowner, at the  
12 end of the day the landowner says no, I really don't  
13 want it to be Link 7, you know, I want it to be where it  
14 is depicted as Link 10, I mean, now you are left with --  
15 I mean, I hate to use the word condemnation or eminent  
16 domain, but that's where you are left, I think, if the  
17 landowner doesn't agree.

18 So I am just anticipating, you know, how do we,  
19 how do we deal with that issue. I mean we are talking  
20 about splitting someone's land. It just seems like it  
21 is a problem without knowing what the landowner prefers.

22 MR. DERSTINE: I think it is important -- you  
23 are right, I think, what you have outlined in terms of  
24 the process.

25 As Mr. Spitzkoff has testified, and what we

1 understand, is that there have been ongoing and  
2 longstanding discussions with the landowner who owns  
3 that entire parcel between Link 1 and Link 10. It is  
4 one landowner. It is currently being farmed by a  
5 longstanding ranch or farming operation in the valley.

6 And so the biggest concerns of the landowner are  
7 as to the impacts on the farming operation, at least  
8 here in the near term. And so those -- we have also had  
9 discussions with the farm operator. And I think  
10 Mr. Petry can maybe speak to kind of what are those, the  
11 differing impacts on the agricultural operations between  
12 the preferred and Alternative Route 1.

13 MR. PETRY: Certainly. And I will be able to  
14 touch on this in more detail later in my testimony as  
15 well when I talk in further detail about the land use  
16 impacts.

17 But when comparing Link 7 versus Links 9 and 10,  
18 or preferred route versus Alternative Route 1, what we  
19 see is that the preferred route is shorter and, by  
20 virtue of that reduced length, would result in fewer  
21 impacts to the agricultural operations within that  
22 parcel. Link 9 and 10 travel a longer distance and, by  
23 virtue again of that increased length, would result in  
24 additional impacts.

25 In addition to that point, the conceptual siting

1 or locations of the Link 7 on the preferred route does  
2 follow a roadway, a wide roadway that cuts through those  
3 agricultural fields as well. So the idea is that,  
4 because of that location, impacts to agricultural  
5 operations would be reduced as well.

6 The same is true for Links 9 and 10.

7 Mr. Spitzkoff mentioned that there may be some  
8 conflicts, in particular, with Link 9 as it travels  
9 along east to west on the south side of Broadway Road.  
10 There are some wells and other agricultural facilities  
11 in that location as well that could be impacted by the  
12 project.

13 Link 10 on the far eastern portion of  
14 Alternative Route 1 is also similar to Link 7, placed  
15 along a roadway. So between both the preferred and  
16 Alternative Route 1, we have tried to place those in  
17 locations that would minimize those impacts to  
18 agricultural operations, understanding that this is an  
19 area that, you know, future land use indicates will be  
20 developed for mixed use developments, commercial  
21 developments, industrial developments, as well as a  
22 planned freeway.

23 CHMN. CHENAL: Well, if it is for future  
24 development, I mean it just seems if I am the landowner  
25 I would rather have Link 10 than Link 7. But I just --

1 let's do this. Let me ask -- Member Noland has a  
2 question.

3 MEMBER NOLAND: Mr. Chairman, Mr. Petry, it  
4 appears to me that No. 1 and No. 7 are along section  
5 lines, is that correct?

6 MR. PETRY: I believe both of those locations  
7 are actually along quarter sections or quarter quarter  
8 sections, yes.

9 MEMBER NOLAND: Okay. And you talked about on  
10 No. 7 that there is a roadway there. Is it a dedicated  
11 public right-of-way or is it a private road for the  
12 farm?

13 MR. PETRY: My understanding is it is a private  
14 road for the farm.

15 MEMBER NOLAND: And the same with No. 1.

16 MR. PETRY: Yes.

17 MEMBER NOLAND: Okay. Mr. Chairman, in many  
18 cases we have approved routes where they did not have  
19 the right-of-way locked down or an agreement locked down  
20 with the various owners along the way. You know, it  
21 comes down to a final agreement or whatever. And just  
22 because they don't have it right now doesn't bother me  
23 as much as ensuring that it is along a section line or a  
24 quarter section line or a half section line, which makes  
25 sense. And as you can tell, they have different things

1 farmed in those areas, so they have done a natural break  
2 in those areas anyway.

3 Thank you.

4 CHMN. CHENAL: Thank you. Thank you, Member  
5 Noland.

6 Member Woodall.

7 MEMBER WOODALL: So has the property owner filed  
8 any letters of support, nonsupport? Have they expressed  
9 to you their preferences in that regard? I think, I  
10 thought I heard you say they were supportive of either  
11 the preferred or the Alternative 1. Did I mishear that?

12 MR. SPITZKOFF: No. I indicated that, yes.

13 MEMBER WOODALL: Okay. And if you did need to  
14 acquire the right-of-way and you couldn't get it from  
15 him, you know, through agreement, does APS have the  
16 power of an eminent domain? And maybe that's a legal  
17 question.

18 MR. DERSTINE: Mr. Chairman, Member Woodall, I  
19 think at the end of the day APS does have the ability to  
20 seek condemnation. But that's certainly not --

21 MEMBER WOODALL: Of course, of course. I  
22 understand.

23 MR. DERSTINE: Yeah.

24 MEMBER WOODALL: I just wanted to -- so it looks  
25 like the property owner is okay with it. It looks like

1 you can be able to do it by purchase, and if not, you  
2 have, I'll say, the nuclear option. And I will just  
3 call it that.

4 Thank you very much.

5 CHMN. CHENAL: Member Gentles.

6 MEMBER GENTLES: So you get the -- and forgive  
7 me if this is a question that doesn't make any sense,  
8 but --

9 CHMN. CHENAL: I have been asking them all  
10 afternoon. So you are in good company.

11 MEMBER GENTLES: You have given me enough cover  
12 then. Thank you.

13 So, you know, I am just trying to wrap my mind  
14 around as well the landowner having the land bisected by  
15 number 7, similar to the Chairman's question. So if we  
16 approve the CEC and you haven't worked out the agreement  
17 with the landowner, and knowing that you have eminent  
18 domain, tell me, just from a layperson's perspective,  
19 what does that do for negotiation with that landowner.

20 Did that make sense?

21 MR. DERSTINE: It did.

22 CHMN. CHENAL: I thought it made sense. It made  
23 the applicant feel uncomfortable.

24 MR. DERSTINE: I am trying --

25 MEMBER GENTLES: Again --

1 MR. DERSTINE: I think the answer to your  
2 question -- and it is a good one, Member Gentles -- is  
3 that, as the witness has testified, we have been having  
4 ongoing discussions and negotiations. And as these  
5 cases oftentimes go, early discussions about  
6 right-of-way and line locations then change later in the  
7 case, and we start, you know, getting different opinions  
8 or questions and viewpoints.

9 And so our early discussions to secure the  
10 right-of-way for the preferred route have recently led  
11 to some questions, you know, about what about  
12 Alternative Route 1. So I think where we are is that  
13 this landowner is supportive of the project. They  
14 understand that this project will be built. It is a  
15 question of where those lines will go.

16 And our view is that we will, APS will do what  
17 it can in terms of final design in pole placement to  
18 minimize the impacts on the current farming operations.  
19 I think the uncertainty that we are facing now is simply  
20 that, you know, we are getting some mixed messages from  
21 the farming operator and the landowner.

22 And so it is not unusual; it is part of the  
23 discussion process. And, you know, I think at the end  
24 of the day, we are of the viewpoint that we can  
25 negotiate with this landowner and secure the

1 right-of-way for the preferred route, and that that  
2 remains the best route for the reasons that Mr. Petry  
3 indicated, that the impacts by virtue of the shorter  
4 line, less structures on the land, make it the best  
5 route.

6 It is along a quarter section line, kind of the  
7 natural break in the farming operations. And I think  
8 you will get a better sense of that from the virtual  
9 tour and an actual tour when you go out and take a look  
10 at the property and where we would propose to put either  
11 the preferred route or Alternative Route 1.

12 But at the end of the day, I think, as we have  
13 indicated, we can and will build any of these routes.  
14 And if it is the view of the Committee that Alternative  
15 Route 1 is the better route, given the impacts, then we  
16 will be happy to build it.

17 MEMBER GENTLES: So, Chair, Mr. Derstine, thank  
18 you. I didn't mean to put you on the spot or make you  
19 feel comfortable, just a general question. Thank you.

20 MR. DERSTINE: Thank you.

21 CHMN. CHENAL: Member Haenichen I saw, and then  
22 we will go to Member Noland and then Member Woodall.

23 MEMBER HAENICHEN: During the course of meetings  
24 with landowners and others, bystanders even, have any  
25 viewshed issues come up? This is something we commonly

1 see in cases.

2 MR. DERSTINE: I am going to refer your  
3 question, Member Haenichen, to Mr. Petry.

4 MR. PETRY: Member Haenichen, yes, they have.  
5 The primary locations where we heard concerns about  
6 viewsheds were represented in the public open house  
7 meeting held in early June, wherein we had a grouping of  
8 residents who are located on the east side of Litchfield  
9 Road, generally in the location I am pointing to here.

10 And what we heard from those residents is that  
11 they didn't want to see lines as they looked west from  
12 their house. Mr. Larsen indicated previously that some  
13 of those preliminary links that were shown included  
14 links that went north and south along Litchfield Road  
15 here. And that was one of the reasons that those links  
16 were eliminated.

17 We also did hear some concerns from landowners  
18 to the south of the project, primarily a couple  
19 residents located here, south of Link 14, wherein they  
20 also expressed the desire for those alternates to be as  
21 far north as possible, putting them more on the data  
22 center sites as opposed to the private part.

23 MEMBER HAENICHEN: For the benefit the Committee  
24 members then, I am talking about viewshed issues now  
25 that you just responded to, which of the three proposed

1 sites had the least complaints about?

2 MR. PETRY: Well, at the point at which we were  
3 out at public meetings, we had not yet developed the  
4 three proposed routes. But when it came to those  
5 preliminary links that we had identified at that time,  
6 it was those links that traveled along Broadway Road and  
7 those that traveled along Litchfield Road where we heard  
8 the most concern about viewshed impacts.

9 MEMBER HAENICHEN: Thank you.

10 CHMN. CHENAL: Member Noland.

11 MEMBER NOLAND: Thank you, Mr. Chairman.

12 Mr. Petry, isn't it true, or it appears to me  
13 that there is more of an impact to that one property  
14 owner in Alternative Route 1 than in the preferred route  
15 because of the southern part of Broadway Road that -- if  
16 you have it, if you could put that up there, please,  
17 with No. 9, No. 9. There would be impact on that  
18 property along No. 9 as well as No. 10, is that correct?

19 MR. PETRY: That is correct. The location of  
20 Link No. 9, again, is on the south side of Broadway  
21 Road. It is also in a location where there is existing  
22 69kV infrastructure.

23 But you are correct, it would be Link 9 and 10  
24 where the line would travel in those locations, which  
25 would equate to a longer distance than Link 7 on the

1 preferred route.

2 MEMBER NOLAND: And more of an impact as far as  
3 the need for right-of-way --

4 MR. PETRY: Yes.

5 MEMBER NOLAND: -- from that particular owner of  
6 the property, is that correct?

7 MR. PETRY: Yes.

8 MEMBER NOLAND: Okay.

9 CHMN. CHENAL: Thank you.  
10 Member Woodall.

11 MEMBER WOODALL: So are you going to acquire  
12 easements or fee simple, do you know? Or is that still  
13 up in the air based on your negotiations with the  
14 landowner?

15 MR. LARSEN: Can you repeat.

16 MEMBER WOODALL: I am sorry. Are you going to  
17 acquire easement over the lands, or will you be  
18 acquiring fee simple title to it?

19 MR. LARSEN: No, they will be easements.

20 MEMBER WOODALL: Okay.

21 MR. LARSEN: And he has been agreeable in the  
22 fact that he will grant us the easements. It is just we  
23 are going back and forth on which ones.

24 MEMBER WOODALL: Sure. Thank you.

25 MR. DERSTINE: And Mr. Petry, I just want to

1 circle back with regard to Member Haenichen's question  
2 about visual impacts, tying into Member Noland's  
3 questions on 9 and 10.

4 As I am looking at the map on the left screen,  
5 it appears that in terms of viewshed impacts, Links 9  
6 and 10 will have the greatest impact to those viewers  
7 who are in those residences there to the northeast, and  
8 that by putting the line out on along Broadway Road,  
9 that also creates visual impacts. Is that a fair  
10 statement?

11 MR. PETRY: Yes, it is. As I indicated  
12 previously, the residents located on the east side of  
13 Litchfield Road in this general area did express a  
14 concern for viewshed impacts. And Links 9 and 10, as  
15 compared to Link 7, would bring those structures closer  
16 to their homes and, therefore, have a higher impact to  
17 visual resources.

18 CHMN. CHENAL: Member Woodall.

19 MEMBER WOODALL: So I had a question about the  
20 number of structures that would be going from -- on the  
21 preferred route that would be going through the  
22 property, through the property owner with whom you are  
23 dealing. I think it would be between -- is it Link 8  
24 and 7? I just want to know how many structures would be  
25 there.

1 Yes. Thank you for pointing, because I would  
2 blind myself with this. I use this only for my cat. So  
3 thank you.

4 MR. SPITZKOFF: So yes, basically Link 7 there,  
5 from the south of Broadway Road to the existing line I  
6 believe is where you are asking.

7 MEMBER WOODALL: Yes. I want to know how many  
8 structures would be, if you acquire this particular  
9 easement, how many structures would there be through the  
10 landowner's property. And I understand you have given  
11 various distances, but give me a ballpark.

12 MR. SPITZKOFF: So pending the final design, it  
13 actually would be most likely one structure or two  
14 structures, one structure as we cross over from the  
15 north side of Broadway Road to the south side to land on  
16 the south side in an H-frame structure. And then final  
17 design will determine if we can do a single span all the  
18 way to the existing line or if we would need one  
19 additional structure in the middle. But it would be  
20 that one structure, maybe two structures.

21 MEMBER WOODALL: Thank you very much. That was  
22 important information for me. I appreciate it.

23 CHMN. CHENAL: And was that for, Mr. Spitzkoff,  
24 before we get to Member Haenichen, was that -- were you  
25 speaking about Link 7?

1 MR. SPITZKOFF: Yes.

2 CHMN. CHENAL: Thank you.

3 Member Haenichen.

4 MEMBER HAENICHEN: Mr. Larsen, the last thing I  
5 recall you saying is that you are going back and forth  
6 with certain entities about nuances of what line or what  
7 placement would be the least onerous to them.

8 Here is my concern. Could some of those  
9 discussions lead to a preference for a location  
10 different than the one that this Committee ultimately  
11 allows the company if we do issue a CEC?

12 MR. LARSEN: I don't believe so.

13 MEMBER HAENICHEN: Thank you.

14 MR. LARSEN: I can't say that for certain, but I  
15 don't believe so. I think whatever the Committee  
16 ultimately decides, we will be able to work that out  
17 with the landowner.

18 MEMBER HAENICHEN: Thank you.

19 BY MR. DERSTINE:

20 Q. Mr. Larsen, we stole the show from you a little  
21 bit, but why don't you finish up with -- you touched on  
22 the highlights of the preferred route. Why don't you do  
23 the same for Alternative Route 1 and Alternative  
24 Route 2.

25 A. (BY MR. LARSEN) Sure. And I think, again,

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1 everyone is fairly familiar with what Alternative  
2 Route 1 is now. It is slightly longer. 50 percent of  
3 it is still on customer lands. But there is a little  
4 bit more impact on the private land in this alternative.

5 And Alternate Route 2, as we talked, is  
6 considerably -- well, it is not considerably longer, but  
7 it is the longest of the three routes. I will say that  
8 from the landowner's perspective, he does not support  
9 this and would not agree to all of these lines north and  
10 south along his property.

11 CHMN. CHENAL: Mr. Derstine, could you then  
12 translate the slide on the right, which is the  
13 Alternative Route 2, the sub route, what -- just kind of  
14 walk us through an example of what you mean.

15 MR. LARSEN: Sure. Yes, I kind of skimmed over  
16 that. But the first main bullet here is for the main  
17 route, Alternative 2, which would come down and to the  
18 south back into the existing line, back up out and along  
19 Broadway and down Link 10. The sub bullet is what we  
20 call the sub route, which was this Link 6. And if we  
21 built Link 6, it is a little bit shorter and you would  
22 not need, or 7. However, that does create a much bigger  
23 impact on the isolated residents right here as well as  
24 the landowner on the north side of his property.

25 CHMN. CHENAL: All right. Thank you.

1 MEMBER NOLAND: Mr. Chairman.

2 CHMN. CHENAL: Yes, Member Noland.

3 MEMBER NOLAND: The City of Goodyear land, is  
4 that along Broadway?

5 MR. LARSEN: Yes. That's just basically the  
6 Broadway Road right-of-way.

7 MEMBER NOLAND: Right-of-way, thank you.

8 MR. LARSEN: Right.

9 BY MR. DERSTINE:

10 Q. The next topic that we are going to talk about  
11 is corridor. But before we do that, I guess I want to  
12 emphasize what I heard you say is, as you walked us  
13 through the development of the project, you started with  
14 this preliminary study area and an eastern connection  
15 point was considered, and it was through the public  
16 process and what we heard from residents and the  
17 jurisdictions that you need to push more of this project  
18 onto the Wildcat and the Cyclone properties.

19 And we went, we went back to the data center  
20 owners and we talked about that to them, and we then  
21 developed routes that came forward as the preferred and  
22 Alternative Route 1 that did that. That is that, rather  
23 than pushing all the structures on south of the project,  
24 we were able to come up with a design that pushed a big  
25 portion of the project onto the data center sites. Is

1 that an accurate statement?

2 A. (BY MR. LARSEN) That is very accurate, that we  
3 were able to go back and work with Microsoft to find a  
4 location that didn't interfere with their operations or  
5 the facilities, and yet it took the burden off of the  
6 private landowners to the south.

7 Q. Okay. Thank you.

8 And that -- go ahead.

9 CHMN. CHENAL: Member Haenichen.

10 MEMBER HAENICHEN: Before I forget, I would hope  
11 that tomorrow when we do the tour, that you, your  
12 representative, will tie in all of these comments we  
13 have been making about issues relating to the landowners  
14 so we can actually be standing on the thing that we are  
15 talking about.

16 Thank you.

17 MR. LARSEN: Yeah. And if I just might add to  
18 that, absolutely, and I think those of you that do go on  
19 the tour, it really gives you a much better picture than  
20 what you can get from these maps, or even the virtual  
21 flyover which you will later see.

22 BY MR. DERSTINE:

23 Q. So let's talk about corridor and right-of-way.  
24 And I mentioned in my opening in the application we  
25 asked for a 500-foot corridor, but that has changed and

1 we are asking for a broader corridor on the data center  
2 property. What we are showing on the left screen there  
3 is what we have come up with in terms of our corridor  
4 map for the preferred route.

5 Talk us through that and why we have broadened  
6 or widened the request on the data center sites and what  
7 benefits that may give.

8 A. (BY MR. LARSEN) Yes. As you said, we did  
9 request a 500-foot corridor in our application. And we  
10 are still asking for a 500-foot request on these, on the  
11 private property parcels.

12 We are asking for a variable corridor up here on  
13 the data center properties. The reason why is to give  
14 us some leeway, if for some reason we can't drop in and  
15 out of the substation as we show here, that we would  
16 have a little room to work out the final design there.

17 Also, the distance here, we are asking for a  
18 larger one because we wanted to measure, first of all,  
19 for ease in defining the corridor from the north side of  
20 Broadway Road, and again, we wanted to make sure that in  
21 the final design we could avoid any of the conflicts,  
22 you know, with the Microsoft facilities, their access,  
23 their water, sewer, and all of those type of conflicts.

24 Q. I apologize, Mr. Larsen. I was gesturing. I  
25 think this might be the right time to hand out -- we

1 have got maps that show these corridors that --

2 A. (BY MR. LARSEN) I am sorry, yes.

3 MR. DERSTINE: And Mr. Chairman, we had talked  
4 about, during our prehearing conference, about how we  
5 intended to describe the route and define its place on a  
6 map and to further define the corridor. So this is our  
7 effort at doing that. And we will --

8 MR. LARSEN: And if I could add, those are on  
9 your iPads as well.

10 MR. DERSTINE: I guess for the record, we  
11 will -- I will hand one of the copies to the court  
12 reporter, but the preferred corridor map will be APS-22,  
13 and the Alternative Route 1 corridor map will be APS-23.

14 MEMBER WOODALL: What I wanted to ask was: We  
15 have this large size exhibit; were you contemplating  
16 that this size exhibit, if we grant you a CEC, that  
17 would be attached to the CEC?

18 MR. DERSTINE: No.

19 MEMBER WOODALL: So it is going to be reduced in  
20 size?

21 MR. DERSTINE: Yes.

22 MEMBER WOODALL: And you would anticipate it  
23 would be what size?

24 MR. DERSTINE: Well, I anticipate that it would  
25 be eight and a half by 11 so we could ultimately file it

1 with Docket and the Commission.

2 MEMBER WOODALL: Okay. That's what I thought.  
3 I just wanted to confirm on the record.

4 MR. DERSTINE: Yeah. I think we used this  
5 larger format because it is easier to see.

6 MEMBER WOODALL: Of course, of course. Thank  
7 you very much.

8 BY MR. DERSTINE:

9 Q. So Mr. Larsen, you have talked about the reason  
10 for the broader width. With regard to the land to the  
11 south, if I am looking at that correctly, we are still  
12 only seeking a 500-foot corridor for that portion of the  
13 project, is that right?

14 A. (BY MR. LARSEN) That is correct.

15 Q. But within that 500 feet, that allows APS to  
16 negotiate and get input from that landowner in terms of  
17 the final pole placement and the final design of the  
18 project that would help mitigate any sort of impacts on  
19 ongoing farming operations, is that true?

20 A. (BY MR. LARSEN) That's correct. That would  
21 allow us to work with him on the locations that would  
22 minimize the impacts.

23 Q. Okay. And it is the same for, we are looking at  
24 the preferred corridor map, but it will be the same for,  
25 for the corridor map for Alternative Route 1; we are

1 asking for a 500-foot corridor with regard to that, that  
2 southern land, but, again, the broader corridor is to  
3 allow for final design on the data center campuses?

4 A. (BY MR. LARSEN) That's correct.

5 Q. Anything else that's important for the Committee  
6 to know or understand about the corridors or the  
7 right-of-way?

8 I guess we haven't touched on the right-of-way.  
9 How much right-of-way are we seeking?

10 A. (BY MR. LARSEN) I am sorry. We will be asking  
11 for a 120-foot right-of-way. However, if there are some  
12 places that we are limited to 100 feet, we can live with  
13 that. But we would like to have a 120-foot ultimate  
14 right-of-way within that corridor.

15 Q. Okay. And since we have handed out what we  
16 propose to be the Exhibit A as the description of  
17 whatever, of the route, that's if the Committee were to  
18 grant us a CEC, for the preferred or the alternative  
19 route, those maps would be attached to the CEC and would  
20 describe the line.

21 Mr. Petry, can you kind of walk us through what  
22 is shown on those, the Exhibit As, those corridor maps?  
23 Because there is also then a narrative portion. Tell us  
24 what all that is.

25 A. (BY MR. PETRY) Certainly. So these

1 corridors -- and maybe we could go back to the preferred  
2 route corridor to use that as an example. The mapping  
3 product that you see here illustrates the corridors and  
4 corresponds with the narrative we have developed as well  
5 to describe those corridors.

6 And what we have tried to do is place these  
7 corridors at locations where we have a good baseline for  
8 reference. For example, if you look at Link 1 on the  
9 western portion of the preferred route, that link and  
10 that corridor is based off the property boundary, the  
11 western portion of this property boundary, or Assessor's  
12 Parcel No. 500-80-015A. And it would be a 500-foot  
13 corridor extending to the east from the westernmost  
14 portion of that property.

15 Similarly, where you see Link 7 on the eastern  
16 portion of the preferred route, the conceptual alignment  
17 or the center line of that corridor is based on an  
18 extension of the property line to the north. Because in  
19 this general location, the property to the south, there  
20 is no property boundary there. We have extended the  
21 property line between the Cyclone and Wildcat site to  
22 the south with a 250-foot buffer on either side of that  
23 boundary.

24 CHMN. CHENAL: Member Noland.

25 (An audio disturbance occurred.)

1 MEMBER NOLAND: Thank you.

2 Mr. Petry, parcels that are designated as 14D,  
3 14E and 14C, are those different property owners than  
4 the main owner that you are dealing with?

5 MR. PETRY: My heart is still racing from that  
6 sound. Bear with me for a moment.

7 MEMBER NOLAND: Mine, too.

8 CHMN. CHENAL: Before you answer, Mr. Petry,  
9 Member Noland, could I ask you to point those out with  
10 the laser pointer.

11 MEMBER NOLAND: Sure. 14D, 14E looks like an  
12 easement or a right-of-way around that parcel, and then  
13 14C is just south of Broadway and west of the proposed,  
14 or the quarter section line.

15 MR. PETRY: Member Noland, I will start with  
16 Parcel No. 500-80-014C, which is immediately west of  
17 Link 7 on the south side of Broadway Road. That parcel  
18 is owned by the same owner as the larger area to the  
19 south, including 014A and 015A. That is all one owner.

20 Parcels 14D and 14E are owned by two separate  
21 entities or individuals. 14E is, I think as you  
22 indicated, I believe that they are canal laterals that  
23 encompass the eastern and southern portion of the  
24 residence that is under separate ownership of  
25 Parcel 14D.

1 CHMN. CHENAL: We have lost the volume.

2 MR. PETRY: Parcel 14D, which is located right  
3 here where I am pointing, is a separate owner. So  
4 between 14D, 14E, C, and A, there are three separate  
5 owners. 14C and 14A is under the same ownership. 14D  
6 is a separate owner, and 14E is a separate owner as  
7 well.

8 MEMBER NOLAND: Then, Mr. Chairman, Mr. Petry,  
9 the proposed corridor and future easement or  
10 right-of-way really doesn't impact that one parcel  
11 that's privately owned or the canal alignment, potential  
12 canal alignment, since the same owner for 14C is the  
13 owner of the majority of the rest of the farmland, is  
14 that correct?

15 MR. PETRY: That is correct.

16 MEMBER NOLAND: Okay. Thank you.

17 CHMN. CHENAL: Member Woodall.

18 MEMBER WOODALL: I am afraid to approach the  
19 microphone.

20 So 14D and 14E did receive notice of the project  
21 as proposed and of the open houses, is that correct?

22 MR. PETRY: Yes.

23 MEMBER WOODALL: I know as part of your public  
24 process you take comments. Did you get any comments  
25 from the owners of those two aforementioned parcels?

1 MR. PETRY: Yes.

2 MEMBER WOODALL: Okay. And you will address  
3 those in due course?

4 MR. PETRY: And I am happy to address them now  
5 as well.

6 MEMBER WOODALL: I don't want to interrupt you.  
7 That's not true. We all know that I would be  
8 interrupting you anyway. But yes, if you wouldn't mind  
9 summarizing those.

10 MR. PETRY: We had already mentioned the fact  
11 that some of the landowners to the south expressed a  
12 desire to place the facility on the data center parcels  
13 wherever possible. And that was what we have heard from  
14 those landowners and residents as well.

15 MEMBER WOODALL: Thank you very much, sir.

16 CHMN. CHENAL: Member Gentles.

17 MEMBER GENTLES: I am afraid.

18 I assume, I assume that when we get to the  
19 public comment stage of your testimony that we will have  
20 a full accounting of what that public comment, those  
21 public comments were.

22 MR. PETRY: I am happy to share the details of  
23 those public comments. The bulk of the comments, again,  
24 expressed a desire to place those lines north of or on  
25 the data center parcels.

1 MEMBER GENTLES: I think you will find that I  
2 am -- I get interested in public comment so I have  
3 context. So when we get to that point, if you have some  
4 spreadsheet or some report that kind of outlines, you  
5 know, all the relevant public comment, that would be  
6 really good.

7 So thank you.

8 CHMN. CHENAL: Member Hamway.

9 MEMBER HAMWAY: I will just speak really loud.  
10 Okay?

11 Now I have forgotten what I was going to say.  
12 Oh, so when you had your public outreach, you only  
13 showed them preferred route 2? Was that the first thing  
14 they saw? Have, the people who presented comments, have  
15 they seen the preferred route?

16 MR. PETRY: So I will step back and start with  
17 what we presented at the public open house meeting in  
18 early June. The newsletter that was sent out to the  
19 entirety of that preliminary study area, which included  
20 over 13,000 entities, included the preliminary links  
21 map, and that showed some of those links that Mr. Larsen  
22 had described previously. They were not yet broken into  
23 routes or preferred or any alternatives. They were  
24 shown individually as links that could be connected in  
25 order to make a full connection from the Palm Valley to

1 Rudd line into the TS-15 and 18 substations.

2 Subsequent to that open house meeting, and after  
3 hearing some input from the public, as I mentioned,  
4 wherein they expressed a desire to push facilities  
5 further west of Litchfield Road and further north of  
6 Broadway, we then refined those links further, removed  
7 some of those links that were in those locations, and,  
8 where possible, moved them onto the Microsoft facility.

9 Following that removal of links and creation of  
10 the preferred and alternative routes, in order to  
11 provide notice of today's hearing, this week's hearing,  
12 we sent out additional mailings to that same list of  
13 over 13,000 people. And with that mailing, we included  
14 the three route alternative maps, the preferred,  
15 Alternative 1, and Alternative 2.

16 MEMBER HAMWAY: Okay. Thank you.

17 MR. PETRY: You are welcome.

18 BY MR. DERSTINE:

19 Q. And can I ask, Mr. Petry, the initial, or the  
20 preliminary links that went out that members of the  
21 public had an opportunity to review and comment upon at  
22 the open house, did those links include what came  
23 forward in the preferred and Alternative Route 1?

24 A. (BY MR. PETRY) They did, except for those links  
25 that were created or pushed north onto the Wildcat and

1 Cyclone data center sites.

2 Q. But in terms of the routes that we brought  
3 forward, the preferred and Alternative Route 1, the  
4 links, the sections of those routes that we are looking  
5 at as they impact the property south of the data  
6 centers, those were all included and members of the  
7 public had an opportunity to comment upon those. What  
8 they didn't see was the new route design or project  
9 design that then pushed portions of the project onto the  
10 data center campuses, is that right?

11 A. (BY MR. PETRY) Yes.

12 Q. Okay. And so if someone, a member of the public  
13 had a large concern or wanted to comment on these  
14 southern portions, say on the preferred route, 1 and 7,  
15 or as to Alternative Route 1, what became 9 and 10,  
16 those links were there and they were available for  
17 comment and they saw those?

18 A. (BY MR. PETRY) Yes. And, in fact, what we  
19 tried to do, the reason we have these individual link  
20 numbers identified is, in order to carry those through  
21 the entire process, at that time of the public open  
22 house meeting and the newsletter that I identified the  
23 public open house meeting, those link numbers were  
24 identified in the same manner you see here so that an  
25 individual could see how those link numbers are carried

1 forward or not throughout the process.

2 One of the things we also did at the public open  
3 house meeting was we had a GIS workstation set up so  
4 that members of the public could comment; through Google  
5 Earth, take a closer look at where these links may be  
6 located relative to their properties.

7 CHMN. CHENAL: Member Woodall.

8 MEMBER WOODALL: Did you maintain copies of  
9 email or written comments or comments on your website  
10 and any responses thereto? And if so, why aren't they  
11 in the application? I know Mr. Gentles has some  
12 expertise in this area and he may have some further  
13 questions in that regard. But why weren't they in here?

14 MR. PETRY: Member Woodall, yes, we did. And  
15 there were fewer than, I think, 10 comment forms  
16 received during that process --

17 MEMBER WOODALL: Holy moly.

18 MR. PETRY: -- all with individual commenters'  
19 names and contact information included on them. We felt  
20 that was more information than needed to be included in  
21 the application relative to those individuals' names and  
22 locations. But we have copies of those and are  
23 certainly happy to share them with the Committee.

24 CHMN. CHENAL: Member Gentles.

25 MEMBER GENTLES: As it relates to those

1 comments, I mean we don't really care about emails and  
2 personal identifying information. I am just -- we are  
3 just looking for, even if it is 10, next time it might  
4 be a thousand, we certainly would just like to see what  
5 those comments surmount to and the responses --

6 MR. PETRY: Certainly.

7 MEMBER GENTLES: -- as it relates to the breadth  
8 of the outreach. So if you sent out -- how many mailers  
9 did you say you sent?

10 MR. PETRY: Over 13,000.

11 MEMBER GENTLES: And you got 10 responses --

12 MR. PETRY: Approximately --

13 MEMBER GENTLES: -- did you say?

14 MR. PETRY: Sorry to interrupt.

15 Approximately 10 comment forms were received at  
16 the open house meeting. And since then, and since the  
17 second newsletter that provided notice of this week's  
18 hearing went out, in total we have received  
19 approximately 20 or so comments. There were  
20 approximately 13 people, I think 13, that signed in at  
21 the public open house meeting as well. So relative to  
22 the number of mailings sent out, it was pretty low  
23 attendance.

24 MEMBER GENTLES: Again, it helps context for me.  
25 I am sure it does for the rest of the Committee.

1 CHMN. CHENAL: Let me suggest -- my timer that  
2 plays that wonderful Notre Dame fight song, that was 90  
3 minutes ago. We would like to take a break at 90  
4 minutes.

5 MEMBER NOLAND: Mr. Chairman, I can't hear you.

6 CHMN. CHENAL: I think it is time to take a  
7 break. I am afraid to get too close to the microphone.  
8 But I think we have been -- we are a little over 90  
9 minutes, so let's take a 15-minute break. We will  
10 resume -- we have our public comment at 5:30, so we will  
11 go as long as we want to and then we will break again  
12 before the public hearing. Okay? Take a 15-minute  
13 break.

14 (A recess ensued from 4:32 p.m. to 4:56 p.m.)

15 CHMN. CHENAL: All right. Let's get back on the  
16 record.

17 I think when we left, Mr. Larsen had a little  
18 bit of testimony left. And then at some point I think  
19 before we break for the evening, and then we will resume  
20 with the public, you know, comment session later, I  
21 think off line Ms. Benally and I discussed a flyover  
22 presentation. And then let's discuss the tour tomorrow  
23 so we are clear on timing.

24 So unless there is anything we should discuss  
25 before that, I will just turn it back to the applicant

1 to finish up Mr. Larsen or whatever questions they have  
2 with the panel.

3 MR. DERSTINE: Thank you, Mr. Chairman.

4 BY MR. DERSTINE:

5 Q. Mr. Larsen, the next topic for you is going to  
6 be project cost and facilities. But before I move to  
7 that, I guess I wanted to close the loop in terms of  
8 this discussion that we were having about the preferred  
9 and Alternative Route 1, and discussions with the  
10 underlying landowners about those two routes.

11 What I understand from your testimony is that  
12 discussions with the underlying landowner as well as the  
13 farm operator on both the preferred and Alternative  
14 Route 1, and I guess at the end of the day if we get a  
15 strong indication that they want Alternative 1 instead  
16 of the preferred, that's a route that APS can support  
17 and build. Is that a fair statement?

18 A. (BY MR. LARSEN) That is a fair statement, yes.

19 Q. But it continues to be our view in terms of  
20 impacts and, you know, the best route for serving the  
21 project, as well as visual impacts and the other types  
22 of impacts beyond just the landowner, that the preferred  
23 route is probably the best route?

24 A. (BY MR. LARSEN) Yes, I agree with that  
25 statement.

1 Q. Okay. So let's talk cost and facilities. I  
2 think you have got a slide that summarizes the cost for  
3 the project.

4 A. (BY MR. LARSEN) Okay. Yeah.

5 Q. Just walk us through those numbers kind of on a  
6 high level. You have got the chart on the left. But  
7 kind of looks like you have got them broken down by  
8 right-of-way cost, construction cost, and then total  
9 cost comparison between the preferred -- the three  
10 routes. Just touch on those.

11 A. (BY MR. LARSEN) Yes. And the chart on the left  
12 is included in the application and was taken out of the  
13 application.

14 Right-of-way costs range from 1.47 million,  
15 which was for our preferred route, up to 2.37 million  
16 for the Alternative Route 2. And the Alternative  
17 Route 1 is in between there. And if you look at the  
18 table, Alternative Route 1, that is about 1.62 million  
19 for right-of-way.

20 Construction costs for the preferred route are  
21 about 2.65 million; for Alternative Route 2,  
22 4.1 million. So the total cost with right-of-way and  
23 construction -- and this is only for the transmission  
24 line, nothing else -- would be 4.12 million for the  
25 preferred route. And jumping over to the table for a

1 minute for Alternative Route 1, it is 4.63 million, and  
2 Alternative Route 2 is 6.47 million.

3 CHMN. CHENAL: Member Woodall.

4 MEMBER WOODALL: Mr. Larsen, could you explain  
5 to us how you or APS arrives at estimated right-of-way  
6 costs. Are they based on individual appraisals of  
7 particular parcels, or on some other basis? And if so,  
8 could you tell us about that.

9 MR. LARSEN: Yes. It is based on a recent  
10 appraisal that we had done of land out there, and it is  
11 comparable value to the price that the Wildcat had paid  
12 for the property there.

13 MEMBER WOODALL: Thank you, sir.

14 CHMN. CHENAL: Member Noland.

15 MEMBER NOLAND: Mr. Chairman, Mr. Larsen, are  
16 you having the right-of-way given to you by Microsoft  
17 and the other data center, or are you having to purchase  
18 that right-of-way?

19 MR. LARSEN: It is my understanding that they  
20 will give us that right-of-way; we will not be  
21 purchasing it.

22 MEMBER NOLAND: So the 1.47 million is just for  
23 the two southern portions of that line?

24 MR. LARSEN: That is correct.

25 MEMBER NOLAND: Is that over a period of time?

1 MR. LARSEN: No. That's a one-time easement  
2 cost, and I believe that was based on 75 percent of full  
3 market value for a 120-foot strip.

4 MEMBER NOLAND: Okay. Thank you.

5 BY MR. DERSTINE:

6 Q. Anything else that you wanted to point out or  
7 highlight on the cost figures, Mr. Larsen?

8 A. (BY MR. LARSEN) No, I have nothing else.

9 Q. Okay. Well, let's talk about the structures  
10 then.

11 CHMN. CHENAL: Just one, excuse me, one  
12 follow-up question.

13 MR. LARSEN: Sure.

14 CHMN. CHENAL: For the preferred route, the  
15 total cost then would be 4.12 million?

16 MR. LARSEN: That's correct.

17 CHMN. CHENAL: That would just be the cost for  
18 the transmission line and the right-of-way on the  
19 private property?

20 MR. LARSEN: That's the total cost for the  
21 transmission line even on the Microsoft property.

22 CHMN. CHENAL: Okay.

23 MR. LARSEN: But the right-of-way is only for  
24 the private.

25 CHMN. CHENAL: Thank you for the clarification,

1 yes. Thank you.

2 BY MR. DERSTINE:

3 Q. And again, exclusive of costs for substations,  
4 correct?

5 A. (BY MR. LARSEN) That's correct. It does not  
6 include the substation cost.

7 Q. All right. Now let's talk facilities.

8 A. (BY MR. LARSEN) For this project we are going  
9 to use the steel monopoles and also some H-frame  
10 structures. The H-frames would also be steel poles and  
11 steel framing. The H-frames will mainly be used to  
12 cross over the existing facilities, our 69kV line on the  
13 south side of Broadway, as well as the WAPA  
14 double-circuit 230kV line on the north side of Broadway.

15 And these structures, the reason we would be  
16 using the H-frames is due to the proximity to the  
17 airport and the height restrictions. By using an  
18 H-frame, and putting the phases in a horizontal fashion,  
19 we can cross over with lower structures overall and  
20 still meet the required clearance. For the most part  
21 the other poles would be monopoles.

22 CHMN. CHENAL: Member Woodall.

23 MEMBER WOODALL: Excuse me, Mr. Larsen, but is  
24 there any particular segments of the routes where you  
25 are more sure that a monopole would be or where an

1 H-frame would be, or is that still up to design?

2 MR. LARSEN: We have not finalized the design,  
3 but it is my understanding other than on the -- if we  
4 went back to the preferred route, or actually Link 1,  
5 which is common to all the routes, I believe we will  
6 have two H-frame structures, and then cross over and  
7 then have one H-frame on the Microsoft site or on the  
8 Wildcat site.

9 We would use monopoles crossing between the two  
10 project sites, and then we would have an H-frame on the  
11 Cyclone property on the north side of the WAPA line, and  
12 another H-frame on the south side of Broadway Road. And  
13 then it would be monopoles other than that, is my  
14 understanding.

15 MEMBER WOODALL: You are an engineer, so you are  
16 really good with numbers. So how many structures total  
17 is the project? Let's assume it is the preferred route.

18 MR. LARSEN: Let's see. I would guess maybe 12  
19 or 13 structures in total.

20 MEMBER WOODALL: Thank you. I appreciate that  
21 informed guesstimate.

22 MR. LARSEN: Again, we have not done final  
23 detail.

24 MEMBER WOODALL: I appreciate your informed  
25 guesstimate, sir. Thank you.

1 CHMN. CHENAL: Mr. Larsen, the WAPA line, is it  
2 the green or the blue?

3 MR. LARSEN: The WAPA line is this blue line on  
4 the north, the north side. The green line is our 69kV  
5 line.

6 CHMN. CHENAL: Can we go back to the structures,  
7 the monopole, the H-frame. Tell me again why that's --  
8 for crossing the WAPA line, they all seem to be the same  
9 height, so why is the H-frame better for crossing the  
10 WAPA line?

11 MR. LARSEN: The structures shown here show the  
12 range of 130 to 190 feet. The difference, if you wanted  
13 to compare here, you will see the three phases. This  
14 phase is much lower. In order to get that phase high  
15 enough to cross over the line, that pole or structure  
16 would have to be considerably higher than what an  
17 H-frame structure would be. Does that help?

18 CHMN. CHENAL: Okay. I see. I was actually not  
19 looking at that, the middle one, but the one on the  
20 left. I guess that's still --

21 MR. LARSEN: Same thing.

22 CHMN. CHENAL: I guess it is, the H-frame still  
23 gives you a higher clearance, so that's the reason for  
24 it --

25 MR. LARSEN: Yes.

1 CHMN. CHENAL: -- without extending the length  
2 of the total structure. Okay, thanks.

3 MR. LARSEN: Right. So the range of heights is  
4 130 to 190. Preliminary design and what we believe is  
5 about a worst case is around 180 feet to cross over the  
6 WAPA line. And initial results with FAA do not -- it  
7 appears that that is compatible with the Phoenix  
8 Goodyear Airport restrictions.

9 BY MR. DERSTINE:

10 Q. And we are going to cover the FAA communications  
11 later in your testimony, right?

12 A. (BY MR. LARSEN) That's correct.

13 Q. So the span lengths, I am wondering, one of the  
14 things we have talked about in terms of the number of  
15 structures and the impacts to that, the land to the  
16 south, it appears we have a fair amount of variability  
17 that you can adjust the span lengths. And talk about  
18 how that's done, or if that's better for Mr. Spitzkoff  
19 to do that, whoever can speak to how we use the span  
20 lengths in order to minimize impacts of a project.

21 A. (BY MR. LARSEN) Oftentimes the span length is  
22 based on the angles or turns that the structures might  
23 take. So if you have multiple angles, they are going to  
24 be shorter span lengths.

25 In general, though, just like, for example,

1 going straight north on one of our alternatives, you can  
2 get longer span lengths, but you may have to go slightly  
3 higher poles.

4 Also, if a route was chosen where we had to  
5 rebuild the existing 69 with a -- 230 with a 69  
6 underbuild, generally those would be shorter spans  
7 because the 69kV can't span as far as the 230. I don't  
8 know if that helps.

9 Q. Yeah.

10 Mr. Spitzkoff, did you have something to add  
11 there?

12 A. (BY MR. SPITZKOFF) Yeah. Mr. Larsen touched on  
13 it. I just want to emphasize generally there is a  
14 trade-off between height and span length. The longer  
15 the span length, generally the taller, the higher the  
16 poles will be.

17 Q. So the further the project or the route gets  
18 from the airport, we are able to use taller structures  
19 without impacting the airport operations, and that would  
20 allow us to have longer span lengths?

21 A. (BY MR. LARSEN) That's correct.

22 Q. Anything else you want to add you think is  
23 important to note for the Committee with regard to the  
24 structures that we plan to use?

25 A. (BY MR. LARSEN) No, not at this time.

1 Q. What will the finish be on the monopoles and the  
2 H-frames?

3 A. (BY MR. LARSEN) I am sorry. What was that?

4 Q. The pole finish. Are they using Corten? What  
5 sort of finish are we using on these structures?

6 A. (BY MR. LARSEN) I don't know that we talked  
7 about that. However, I believe in the area with the  
8 existing other transmission lines, probably we would be  
9 galvanized and not the Corten.

10 Q. Okay.

11 A. (BY MR. LARSEN) I believe they would probably  
12 blend in better.

13 MR. DERSTINE: I think unless the Committee has  
14 more questions -- yeah, Member Woodall.

15 CHMN. CHENAL: Member Woodall.

16 MEMBER WOODALL: Can you provide more detail in  
17 the record about what the difference is between the two,  
18 because I am not sure people reading the record would  
19 know.

20 MR. LARSEN: Yes. The galvanized -- and they  
21 are a dull galvanized finish -- are the standard steel  
22 monopoles or structures you see in most cases. Many  
23 times out in maybe a more forested area or more rural  
24 area we would use the Corten, or it is also called  
25 weatherized steel, which is kind of a rust colored pole.

1 It mimics wood structures, if you will. So if there was  
2 existing wood structures, oftentimes we would use those  
3 weathered steel structures to blend in.

4 CHMN. CHENAL: Member Noland.

5 MEMBER NOLAND: Thank you.

6 Mr. Derstine, could you pull that microphone a  
7 little closer. I know you are a little shy about it, me  
8 too, but I am not able to hear some of your comments.

9 MR. DERSTINE: All right. I apologize.

10 All right. I think that wraps up Mr. Larsen's  
11 presentation for the time being on -- we have covered  
12 the project development as well as the costs and the  
13 facilities.

14 I think the next portion of our presentation is  
15 to allow Mr. Petry to walk us through our flyover  
16 simulation, if that works for you, Mr. Chairman.

17 CHMN. CHENAL: I think that's fine.

18

19 FURTHER DIRECT EXAMINATION

20 BY MS. BENALLY:

21 Q. Are you ready to proceed, Mr. Petry?

22 A. (BY MR. PETRY) Yes.

23 Q. Before you start, would you please just touch on  
24 briefly how this simulation that you prepared, EPG  
25 prepared, was prepared, and how the structures and the

1 landscapes, that sort of stuff, was created, to give the  
2 Committee an understanding of what it would look like to  
3 fly over the project.

4 A. (BY MR. PETRY) Yes. So what you will see in a  
5 moment in the virtual tour or Google flyover will be a  
6 moving image of existing aerial imagery. It will show  
7 the existing landscape within the project area. We will  
8 highlight the data center parcels. We will identify  
9 some existing boundaries in the area, as well as the  
10 existing transmission infrastructure and project  
11 components.

12 And in order to develop these, what we do is we  
13 take that existing aerial imagery, as well as the  
14 preliminary design information provided by APS in  
15 generally a CAD, or computer 3-D model form, and would  
16 overlay that onto the aerial imagery from Google Earth.

17 We would then, through Google Earth and other  
18 softwares, set a camera viewing angle that would then  
19 pan from east to the north and then over to the -- I am  
20 sorry, from the west to the north and over to the east  
21 to give you an overview of each of the project  
22 alternatives.

23 And the way we will proceed with this is  
24 starting with, again, identifying some of the features  
25 within the area. Then we will start with the preferred

1 route, to give you an overview of that, go to the  
2 Alternative Route No. 1, and then do the same for  
3 Alternative Route No. 2.

4 So what you see here is the project study area.  
5 This is a two-mile buffer off of the alternatives. And  
6 we will zoom in a little closer and give you an overview  
7 of the region.

8 Now, you can see in orange the Wildcat site. To  
9 the east of that in blue would be the Cyclone data  
10 center site. To the north of those facilities is the  
11 Phoenix Goodyear Airport. To the south is Broadway  
12 Road, and to the east is Litchfield Road.

13 South of those facilities are the existing  
14 transmission infrastructure. You can see the utility  
15 corridor here further to the south approximately half a  
16 mile, as well as the infrastructure along Broadway Road.  
17 Now shown are the TS-15 and TS-18 substations within the  
18 data center sites.

19 Now, what we have done is zoomed down a little  
20 closer. You can see slightly out of the southern  
21 portion of this view the existing Palm Valley to Rudd  
22 transmission line which runs roughly in this location  
23 here. The location identifying the western portion of  
24 the preferred route would be the southern portion of  
25 Link 1. And this is the location where it would

1 interconnect to the Palm Valley to Rudd transmission  
2 line. These alignments shown now are the conceptual  
3 alignments that are shown on the project maps you have  
4 in front of you.

5 Now displayed is the proposed corridor that we  
6 have seen for the preferred route. We will zoom in  
7 closer and you can again see the turning structures on  
8 the existing Palm Valley to Rudd line, this location  
9 here.

10 I will pause for a moment. And what you can see  
11 is, again, Link No. 1 which extends north from the Palm  
12 Valley to Rudd transmission line, runs along the western  
13 boundary of the parcel we discussed previously, crosses  
14 over the existing 69kV line on the south side of  
15 Broadway Road, as well as the existing 230kV line on the  
16 north side of Broadway Road.

17 Q. Mr. Petry, could I get you to pause a moment and  
18 point out the WAPA line that was discussed earlier and  
19 where the potential H-frame structures could potentially  
20 be placed.

21 A. (BY MR. PETRY) Yes. Those H-frame structures  
22 that Mr. Larsen described, as he indicated, would  
23 primarily be located at the crossing points of the WAPA  
24 line, or Broadway Road. There would be an H-frame  
25 structure in this location here right south of Broadway

1 Road there, and an H-frame structure on the north side  
2 of Broadway within the Wildcat data center site. And  
3 there is also an H-frame structure located further south  
4 of Broadway Road in this particular location here.

5           Again, as we move further north along Links 1  
6 and 2, these links are going to be common to all project  
7 alternatives. And what you can see from this location  
8 is a residence located to the west of the alignment  
9 shown here. This is the location that we have  
10 identified as the highest visual impact for the project,  
11 a high visual impact to that residence in this location.  
12 That is also displayed on the back of your placemat.

13           And, you know, as I get further into my  
14 testimony tomorrow, I can provide you more on those  
15 visual simulations, how those were completed and what  
16 they include. For this point I just wanted to point out  
17 that location does correspond with the simulation  
18 included on your placemat.

19           As we move further north you can see where the  
20 preferred route Links 1 and 2 connect into the TS-15  
21 substation location within the Wildcat data center site.  
22 The preferred route would then exit the TS-15 substation  
23 and travel to the east, crossing the Wildcat data center  
24 parcels and then connect into the TS-18 substation  
25 within the Cyclone data center site.

1           From that location, the project preferred route  
2 would extend south. And this is, again, a location  
3 where the H-frame structures would be used in order to  
4 cross over the existing WAPA 230kV transmission line,  
5 north of Broadway and south of Broadway. Again, in  
6 addition to the 230kV line north of Broadway Road, there  
7 is an existing 69kV line on the south side of Broadway  
8 Road.

9       Q.     Mr. Petry, could I get you to pause just a  
10 moment. I believe this goes to Committee Member  
11 Woodall's question regarding the number of structures  
12 that would be in the area that crossed that particular  
13 area. And this simulation is indicating one structure  
14 in that area, is that correct? Am I seeing that  
15 correctly, or is there more?

16       A.     (BY MR. PETRY) I believe this is showing two  
17 structures. There is a structure slightly south of  
18 Broadway Road that may be a little bit difficult to make  
19 out in this simulation. But there would be a structure  
20 south of Broadway Road and then further south of  
21 Broadway Road.

22           Per Mr. Larsen's and Mr. Spitzkoff's testimony  
23 previously, I think through working with the landowners  
24 in these location and adjusting span lengths to the  
25 extent feasible, that structure number could potentially

1 be reduced.

2 Q. Thank you.

3 A. (BY MR. PETRY) The preferred route would then  
4 extend further south and reconnect back into the  
5 existing Palm Valley to Rudd transmission line in this  
6 general location.

7 What we show now would be the conceptual  
8 alignment for Alternative Route 1. Again, Alternative  
9 Route 1 is going to have Links 1 and 2 in common with  
10 the preferred route.

11 We are now showing the proposed corridor  
12 associated with the Alternative Route 1. We will zoom  
13 in further again, and you can see where the existing  
14 Palm Valley to Rudd transmission line is located we have  
15 three turning structures here that are existing.

16 Link 1 would, again, travel north along the  
17 western boundary of this existing agricultural field,  
18 crossing over the 69kV line, crossing over Broadway Road  
19 and and the existing WAPA 230kV transmission line,  
20 eventually connecting into the TS-15 substation within  
21 the Wildcat data center site. Alternative Route 1 would  
22 then travel east through the Wildcat data center site,  
23 as was done with the preferred route, and would connect  
24 into the TS-18 substation.

25 Where Alternative Route 1 differs from the

1 preferred route is in this location here further east  
2 and south of the Cyclone data center site. As the  
3 Alternative Route 1 exits the TS-18 substation, it would  
4 again cross over the WAPA 230kV transmission line, cross  
5 to the south side of Broadway Road, and travel east  
6 along the southern alignment of Broadway Road.

7           Once it got to the alignment of Litchfield Road,  
8 which is indicated here, Alternative Route 1 would then  
9 extend south and connect into the Palm Valley-Rudd  
10 transmission line.

11       Q.     Mr. Petry, just to clarify for the record, what  
12 you are referring to or what we have up on the screen  
13 would be Alternative Route 1, and the two links you just  
14 discussed are Links 9 and 10, is that correct?

15       A.     (BY MR. PETRY) That is correct. The link  
16 located on the south side of Broadway Road is shown as  
17 Link 9, and the portion that would then extend south  
18 along the alignment of Litchfield Road is Link 10.

19           We are now displaying the conceptual alignments  
20 of Alternative Route 2. And again, as described  
21 previously by Mr. Spitzkoff and Mr. Larsen, the main  
22 difference between Alternative Route 2 and the preferred  
23 and Alternative Route 1 would be that those provide the  
24 separate, distinct interconnections for the TS-15  
25 substation on the Wildcat site and the TS-18 substation

1 on the Cyclone site. You can see where in the central  
2 portion of the project area here will be identified on  
3 your placements as Links 4 and 7 are located extending  
4 north and south.

5 We have not developed a proposed corridor  
6 associated with Alternative Route 2, so we won't show  
7 that at this particular flyover.

8 As with the preferred route and Alternative  
9 Route 1, Links 1 and 2 would travel north along the  
10 western boundary of the agricultural fields here and  
11 into the TS-15 substation in this location.

12 Alternative Route 2, instead of traveling east  
13 across the Wildcat data center site, would in this  
14 location travel directly south, crossing over the WAPA  
15 230 line, crossing over Broadway Road, and would then  
16 travel east along the south side of Broadway Road and  
17 would be collocated with the existing 69kV lines in that  
18 location. It would then travel south in between two  
19 residence locations on the south side of Broadway Road  
20 at that location, and eventually make its way back down  
21 due south, tying back into the Palm Valley-Rudd  
22 transmission line at this location.

23 CHMN. CHENAL: Member Haenichen.

24 MEMBER HAENICHEN: If you could stop for a  
25 minute. What is, roughly, the distance from the line to

1 each of those residences?

2 MR. PETRY: In this particular location, the  
3 link would be identified as the southern portion of  
4 Link 18 on sub route -- pardon me, Alternative Route 2.  
5 In this location, the 230 line, or the proposed line,  
6 would be collocated with the existing 69 lines, which  
7 travel through the front yards of those residences.

8 We will now take a view further to the east, and  
9 you can see the second component of Alternative Route 2,  
10 where it would connect into and out of the TS-18  
11 substation within the Cyclone data center site.

12 And I will go ahead and pause it here. What you  
13 can see at this location closest to us would be Link 7  
14 as identified in Alternative Route 2. And this would  
15 provide the connection from the Palm Valley to Rudd  
16 transmission line crossing north across the agricultural  
17 fields in this location, crossing over the existing 69kV  
18 line, crossing over Broadway Road, and again crossing  
19 over the WAPA 230kV transmission line and entering into  
20 the TS-18 substation.

21 CHMN. CHENAL: Member Noland.

22 MEMBER NOLAND: Mr. Chairman, on both this and  
23 the previous flyover for the preferred route you are  
24 showing those lines quite a bit to the east of the  
25 corridor section quarter. Is that on purpose, or are

1 you going to try and locate as close to that road and  
2 quarter section line as possible?

3 MR. PETRY: That is not on purpose. And we will  
4 try to locate as close to those quarter or quarter  
5 quarter section lines as possible. This information is  
6 modeled based on very preliminary design, and, as such,  
7 you know, is not in the specific or exact location as  
8 would be desired.

9 MEMBER NOLAND: Thank you.

10 MR. PETRY: What we can see from this location  
11 now is, again, as the Alternative Route 2 would exit the  
12 TS-18 substation, it would cross over the existing  
13 transmission infrastructure, cross over Broadway Road,  
14 and be collocated again with the existing 69kV line on  
15 the south side of Broadway Road. It would then extend  
16 to the south along the alignment of Litchfield Road and  
17 connect back into the Palm Valley to Rudd transmission  
18 line.

19 What we show now would be what we were  
20 considering calling Alternative Route 2 with sub route.  
21 And just to remind you what this would entail, if you  
22 look at the maps in front of you on your placemat, in  
23 place of Links 4 and 7, Link 6 would be included with  
24 this sub route. And that would remove those north and  
25 south extensions through the ag fields in these

1 locations and would, instead, be collocated along the  
2 south side of Broadway Road with the existing 69kV  
3 lines.

4           You can again see Links 1 and 2 as they would  
5 extend from the Palm Valley to Rudd transmission line.  
6 And these links again are common to all project  
7 alternatives. You can see where Links 1 and 2 would  
8 then connect into the TS-15 substation within the  
9 Wildcat data center site.

10           As our camera angle here turns, you can see  
11 where the transmission line would then extend south out  
12 of the TS-15 substation crossing the WAPA line, crossing  
13 Broadway Road, and would then extend east along the  
14 south side of Broadway Road collocated again with the 69  
15 line in that location.

16           The line would travel east and then connect  
17 traveling north back into the TS-18 substation within  
18 the Cyclone site. You can then see from this location  
19 where Alternative Route 2 with a sub route would extend  
20 south, again crossing the WAPA lines, crossing Broadway  
21 Road, and again be collocated with the existing 69kV  
22 line in this location.

23           Alternative Route 2 with sub route would then  
24 travel in a southward direction along the alignment of  
25 Litchfield Road and connect back into the Palm

1 Valley-Rudd transmission line.

2 BY MS. BENALLY:

3 Q. Does that conclude the flyover, Mr. Petry?

4 A. (BY MR. PETRY) Yes.

5 MS. BENALLY: Chairman Chenal, if there aren't  
6 any other questions from the Committee, I will leave it  
7 to your discretion how you would like to move forward  
8 regarding the route itinerary.

9 CHMN. CHENAL: Yeah, let's talk about the  
10 itinerary, the route itinerary. And I will tell you  
11 when you come back from the tour it might be good to run  
12 the virtual tour one more time, but just run it, not  
13 stop it, just run it. It is helpful to have your  
14 description, but I think when we see it tomorrow and  
15 then in person and then on the tour, and then see the  
16 flyover, I think that will make it all come together  
17 that much better.

18 Given that the public hearing is supposed to  
19 start now, let's do a very just short version of the  
20 summary of the tour. And then we need to talk about  
21 timing, how long it is going to take and when we start  
22 up the hearing, you know, after.

23 MR. DERSTINE: I think Mr. Petry can give us  
24 that short summary of the route tour, and in the  
25 meantime maybe we will hand out to members of the

1 Committee what we have in terms of the itinerary and the  
2 map.

3 CHMN. CHENAL: Thank you.

4 MR. DERSTINE: We have got another one of our  
5 giant maps for you here.

6 CHMN. CHENAL: Member Woodall.

7 MEMBER WOODALL: Speaking of giant maps, I was  
8 wondering if I could prevail upon Mr. Petry to show us a  
9 reduced version of what might be a potential Exhibit A  
10 in black and white. And I am going to ask you to use  
11 your professional judgment to determine if perhaps the  
12 font should be enlarged for purposes of legibility if  
13 the map is presented in that particular format, because  
14 if it is on Docket Control, that's how people are going  
15 to see it.

16 So if you wouldn't mind doing that, and if you  
17 think the font should be enlarged for legibility,  
18 because I don't want to, say, substitute my judgment  
19 because I have bad eyesight, so that would be helpful  
20 for me, sir.

21 MR. PETRY: Member Woodall, we have developed  
22 such a map, a --

23 MEMBER WOODALL: Wonderful.

24 MR. PETRY: -- smaller 8 and a half by 11 black  
25 and white form. In addition to the font style or size,

1 we were concerned about the legibility of the differing  
2 colors for those corridors as well.

3 MEMBER WOODALL: I was going to ask you that.

4 MR. PETRY: I think what we have produced does  
5 the trick well. We will take another look at that, that  
6 it meets the needs of Docket Control.

7 MEMBER WOODALL: I am more worried about the  
8 people who might want to look at it. But thank you very  
9 much for thinking ahead. I appreciate that.

10 CHMN. CHENAL: I think we can have a discussion,  
11 you know, tomorrow or the next day about the exhibit. I  
12 don't know that we are precluded from having it in color  
13 because it is filed electronically. I mean it is filed  
14 and anyone that looks at it online in the docket, it  
15 comes up in color. So I don't -- Member Woodall is  
16 saying it doesn't but I don't know. But if it is filed  
17 in color -- well, let's talk about it at the appropriate  
18 time.

19 So let's talk about the summary, a short summary  
20 of the itinerary, and then we will talk about the  
21 timing.

22 MR. PETRY: Certainly.

23 CHMN. CHENAL: Mr. Petry.

24 MR. PETRY: Thank you, Mr. Chairman. I will  
25 leave out some of the discussion about the particular

1 roads we travel on the way, and we will identify the  
2 stop locations.

3 The first stop would be indicated with the red  
4 stop sign No. 1, which would be located on West  
5 La Estrella. And that would be directly west of the  
6 proposed TS-15 substation. From that location, we will  
7 get a view of the existing 69kV components of that  
8 substation, as well as the area where the 230kV  
9 components would be proposed.

10 From that location, we would travel to Stop  
11 No. 2 identified on the southwest corner of the Cyclone  
12 data center site, but on the south side of Broadway  
13 Road. And that is the location where we have identified  
14 those high visual impacts to one residence, the location  
15 that's shown on your placements as well. This will give  
16 you a good view not only of the data center sites  
17 themselves and the existing transmission infrastructure  
18 within the region, but the location of Links 1 and 2  
19 where they would travel north and south at that  
20 location.

21 We would then propose to stop at stopping point  
22 3 identified right here. And that is in between two  
23 residences located on the south side of Broadway Road.  
24 That would provide us with a good view not only of the  
25 existing 69kV infrastructure on Broadway Road, but also

1 where Alternative Route 2 would extend south between  
2 those residences.

3 We would then propose to move further east to  
4 Stop No. 4, which would be, again, on the south side of  
5 Broadway Road, roughly at the property line between the  
6 Cyclone and Wildcat data center sites. This would,  
7 again, provide you with a view of where Alternative  
8 Route 2 would extend south, but also a view of the Link  
9 No. 7 associated with the preferred route as well.

10 That's at the location of that roadway that we  
11 had discussed previously.

12 We would then propose to move further east to  
13 Stop No. 5, which would be at the intersection of  
14 Broadway and Litchfield Road. This will provide a good  
15 view of Links No. 9 and 10, as well as the existing  
16 transmission infrastructure in that area. It will also  
17 provide you with a view of the existing Palm Valley to  
18 Rudd transmission line and where that easternmost  
19 interconnect would be relative to Alternative Route 1  
20 and Alternative Route 2.

21 And lastly, we would want to stop at Stop No. 6,  
22 which is located at the intersection of Litchfield Road  
23 and Lz2 Ranch Road, also known as Riverside Drive.

24 And this is the location where we heard from a  
25 number of members of the public. There are a group of

1 residents located at that particular location that  
2 expressed the desire to move the distribution line  
3 alternatives further to the west. And so from that  
4 location, we will have a view of the existing  
5 transmission infrastructure. You will also have a view  
6 of the existing data center facility, or existing  
7 building within the Cyclone data center site which is  
8 further to the north of the Cyclone site.

9 And from there you can also have a view across  
10 to the west and see some of the components associated  
11 with the TS-15 substation that are in place today. From  
12 Stop No. 6 we would then propose to return here to the  
13 Comfort Suites.

14 CHMN. CHENAL: And how long do you believe the  
15 tour will take?

16 MR. PETRY: We are estimating approximately two  
17 hours or so, depending on how long the discussion might  
18 be at each of those stops. We have chartered a bus to  
19 allow all Committee members to see things from a  
20 slightly elevated position. We, in some of those  
21 locations, have proposed to actually exit the bus if  
22 desired, but in some locations, based on available space  
23 adjacent to the roadway, we would propose that we stay  
24 on the bus where we do still have a better view or  
25 vantage point.

1 CHMN. CHENAL: Okay. And standard request is  
2 that, when we stop at the points of interest, that we do  
3 typically ask some questions. But we can also, just as  
4 a courtesy to Colette, kind of hold some of the  
5 questions. When we come back we can get -- when we get  
6 back on the record we will talk about that when that  
7 is -- we can get into more discussion, answer more  
8 questions about what we saw. It is just hard for her in  
9 the field to take everything down.

10 So all right. With that, if we start the tour  
11 at 9:00 -- and thank you for that, Mr. Petry. If we  
12 start the tour at 9:00 a.m. and it is going to take two  
13 hours plus, we don't leave exactly at 9:00, I think I  
14 would prefer to have a set time when the hearing resumes  
15 and not just leave it wide open, because not every  
16 member of the Committee is going to be on the tour, and  
17 the public may not do the tour, so I think we would  
18 rather set a time when we resume the hearing. The  
19 applicant is providing breakfast and -- correct,  
20 breakfast and lunch?

21 MR. DERSTINE: Yes.

22 CHMN. CHENAL: Okay. So breakfast would be from  
23 8:00 to 9:00 or something along those lines, or 8:30 to  
24 9:00?

25 MR. LARSEN: They should be set up for breakfast

1 around 7:30, 7:30 to 8:00, so we could get back and get  
2 started around 9:00.

3 CHMN. CHENAL: Okay. And the breakfast is going  
4 to be right next door, right?

5 MR. LARSEN: It will be able to be set up right  
6 out here in the hallway. And we have the two rooms  
7 there that the Committee can sit in, and then we can sit  
8 in the other room.

9 CHMN. CHENAL: All right. Perfect. So if we  
10 assume we start at 9:00, 9:15, two hours roughly, 11:00  
11 something. What time is lunch set up for?

12 MR. LARSEN: I believe they plan on having it  
13 set up around 11:30, roughly 11:30 to 12:00.

14 CHMN. CHENAL: Okay. 11:30 to 12:00.

15 MR. LARSEN: We were planning on hopefully  
16 having lunch over with and be able to start again around  
17 1:00.

18 CHMN. CHENAL: That sounds good. So I am kind  
19 of inclined, but let me throw it out, kind of inclined  
20 to say after the bus we come back here, we then eat  
21 lunch, maybe have a break, but we eat lunch and we  
22 resume the hearing at 1:00. But I would like to take  
23 the temperature of the Committee and the applicant.

24 MEMBER WOODALL: I vote aye.

25 CHMN. CHENAL: Well, any objections to that

1 plan? I just think it is better to do that then say,  
2 well, we will just come back and resume the hearing,  
3 because I don't think that's fair to the Committee  
4 members that aren't on the tour and I don't think it is  
5 fair to the public. If they want to show up, they don't  
6 know what time to be here.

7 So let's do that. Let's have the tour in the  
8 morning. We will plan lunch at, you know, noon. And  
9 then we will resume the hearing at 1:00.

10 MR. DERSTINE: We will have a more firm start  
11 time in terms of when lunch will be available.

12 Just for clarification, the lunch will be, for  
13 this hearing and the participants in the hearing, be set  
14 up here in the breezeway. I believe the hotel has its  
15 own breakfast in the mornings. We will have a breakfast  
16 here in the breezeway for members of the Committee.

17 And there is this board setup room for you to  
18 adjourn to and have your breakfast. And then we will --  
19 I assume we can convene here in the hearing room before  
20 we then, with some final directions, before we get on  
21 the bus.

22 CHMN. CHENAL: That sounds good.

23 Mr. Emedi, we haven't heard much from you in  
24 terms of cross-examination. And it occurred to me, I  
25 don't know if it makes the most sense to wait until the

1 conclusion of the testimony for you to have  
2 cross-examination or whether, since the testimony is  
3 being presented in basically chapters, whether it might  
4 be better to have some cross-examination as we go along.  
5 So I don't know if you have a preference. We will ask  
6 if the applicant is okay with that. Do you have a  
7 preference?

8 MR. EMEDI: I think it probably makes sense,  
9 given that I don't anticipate having much, as today I  
10 didn't have any, so I think given that, I think it makes  
11 sense, if I do have a question, to just ask the question  
12 when I have it, if that's all right with the applicant.

13 CHMN. CHENAL: Okay. The applicant doesn't have  
14 an objection, so we will do that. If you have a  
15 question, just indicate it, and we will give you some  
16 leeway there.

17 MR. EMEDI: Thank you.

18 CHMN. CHENAL: Like I said, when we come back, I  
19 think back to the hearing at 1:00, I think we will have  
20 any follow-up questions, you know, and discussion of  
21 what we saw at the points of interest. I think I would  
22 like to see the flyover at that point one more time just  
23 to run it through, because I think it will be helpful,  
24 having seen it in person and see again the flyover, put  
25 it in context. Then we can resume with the rest of the

1 testimony.

2 Do you anticipate -- does the applicant  
3 anticipate that we will finish tomorrow afternoon with  
4 your panel, or do you think we will fall into Thursday?

5 MR. DERSTINE: I think there is a reasonably  
6 good chance we would finish with our panel tomorrow  
7 afternoon.

8 CHMN. CHENAL: We don't have to, because we are  
9 going to Thursday it looks like in any event. So that  
10 will be fine.

11 So is there anything else we should discuss from  
12 the Committee's perspective before we close the hearing,  
13 we adjourn, get into the public comment section? Does  
14 the applicant have anything we should discuss?

15 MR. DERSTINE: No.

16 CHMN. CHENAL: All right. Well, let's adjourn,  
17 take a five-minute break, and then we will resume with  
18 the public comment, and we will have that. Five  
19 minutes. Thank you.

20 (The hearing recessed at 5:43 p.m.)

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1 (The evening public comment commenced at 5:52  
2 p.m. All parties, Chairman Chenal, Committee Members  
3 Palmer, Woodall, Haenichen, Drago, Gentles, Hamway,  
4 Noland, and Riggins were present.)

5  
6 CHMN. CHENAL: All right. Good evening,  
7 everyone. This is the time set for the public comment  
8 section of our hearing. And for the people that have  
9 shown up to speak, my name is Tom Chenal, and this is  
10 the Line Siting Committee. We are hearing the  
11 application of APS for the Wildcat and Cyclone project.

12 We are interested in hearing any public comment  
13 that the public wants to give this evening. If you  
14 would like to give public comment, I would ask you to  
15 sign the sign-in sheet with the information requested.  
16 That will allow us in the future, or the applicant, to  
17 contact you in the event they seek certain changes to  
18 the certificate of environmental compatibility that they  
19 are seeking in the application, if this Committee grants  
20 it. So it is important we have the contact information.

21 So when you get up to the microphone, if you  
22 give your name and address. And, you know, we like to  
23 keep the comments to three or five minutes, but we are  
24 interested in what you have to say.

25 So, sir, if you give your name, we will begin

1 with you.

2 MR. AMATOR: Are we live?

3 CHMN. CHENAL: You are live.

4 MR. AMATOR: Yes. My name is Fred Amator. If  
5 you look at your tour tomorrow, you will see No. 3.  
6 That's exactly where I live. My address is 14247 West  
7 Broadway Road. And I have lived in that structure there  
8 41 years, moved in July of 1978.

9 This gentleman here mentioned this morning APS  
10 started in Phoenix in 1886. Well, my grandfather was  
11 born in Phoenix in 1885. So looking at it that way, we  
12 were there before APS was. But we are glad you are  
13 there because we need to turn on the lights every once  
14 in awhile.

15 And several questions I listened to today, and I  
16 did learn a lot. That's the reason I didn't get up  
17 early. I didn't want to make the mistake of not  
18 learning all I could. And I had an option. I did go in  
19 the hearing, I think, back the 19th of June and we had  
20 some input. And I do appreciate that. Brad, and  
21 several others were there, I believe.

22 One thing I would like to start with, I would  
23 like to rule out Alternative No. 2 right away. That's  
24 not my best interest. I don't think it is in the best  
25 interest, and also the taxpayer. We are looking at

1 about \$2 million more for that particular one. So my  
2 opinion would be to throw out Alternate No. 2.

3 Now, between the preferred and Alternate No. 1,  
4 I could live with either one, but I was hoping it would  
5 be able to keep the east-west lines on the north side of  
6 Broadway. That's a lot less problem for me.

7 CHMN. CHENAL: So that would be the preferred  
8 route, sir?

9 MR. AMATOR: That would be the preferred, that  
10 would be the preferred.

11 Now, as I did -- as I mentioned on June 19th, I  
12 asked that to be done. And basically the preferred  
13 route does that. But the problem with the preferred  
14 route, in my opinion, it goes right down one of my  
15 neighbors that I have known for many years and farms  
16 that land. And that invades some of his property there.  
17 He has a lot of big trucks go down in there to haul some  
18 of his commodities and things. And just it would be a  
19 problem for him.

20 So kind of sticking together with my neighbors  
21 down there, there is only about three owners of the land  
22 between Litchfield Road and Bullard. And I happen to be  
23 one. I think Mr. Rayner is one, and there is another  
24 named Mr. Wagner. I don't believe Mr. Wagner is here  
25 today.

1 Oh, you are representing Mr. Wagner?

2 MR. BECKHAM: No. I own another property just  
3 west of Wagner.

4 MR. AMATOR: Okay. Sorry about that.

5 Anyway, that's my main comments. Anybody has a  
6 question to me, probably be home tomorrow morning. You  
7 can come by, have the coffee on, but...

8 CHMN. CHENAL: If you have cream.

9 MR. AMATOR: Pardon me?

10 CHMN. CHENAL: If you have cream, some of us  
11 will come by.

12 MR. AMATOR: Cream and sugar if you like.

13 Really, though, I have lines around my house. I  
14 have had them for many years. You will see them; they  
15 run right down Broadway. That's another one, I don't  
16 want one on the right on Broadway.

17 One other thing -- I discussed this with some of  
18 the other people -- there is going to be a water line  
19 and a sewer line go right down Broadway right on the  
20 road, on the edges of the road. And that's going to  
21 make that a very busy construction area here in the next  
22 several months, not that that has anything to do with  
23 siting these lines, just information that you might need  
24 to be aware of.

25 I will turn my time over.

1 CHMN. CHENAL: Before you leave, sir, would you  
2 take the laser pointer and just indicate to our group  
3 where you live. I think I know where point 3 was. You  
4 indicated Stop 3, but if -- don't look at it but just  
5 push the button. There you go.

6 MR. AMATOR: That house -- I am shaky in old  
7 age, but that is that house right there.

8 CHMN. CHENAL: All right. Thank you. Thank you  
9 very much.

10 MR. AMATOR: And if you look on your tour, it is  
11 No. 3.

12 CHMN. CHENAL: Thank you, sir, very much.

13 MR. AMATOR: Thank you for the opportunity.

14 CHMN. CHENAL: And you have your information on  
15 the sign-in sheet, sir?

16 MR. AMATOR: Yes. It is right here.

17 CHMN. CHENAL: Do we have another speaker?

18 MR. RAYNER: Good evening, members of the  
19 Committee, Mr. Chairman. I am Ronald Rayner. I  
20 represent our family business, A Tumbling T Ranches.  
21 Our headquarters is just down the road to the west,  
22 14929 West Broadway. It is not on the photo. We are to  
23 the west. Bullard Road is where our headquarters is.

24 But we farm all of the land in that area. As a  
25 matter of fact, we owned it at one time. I sold Fred

1 the house that he bought 40 something years ago.

2 But anyway, we have got a long history in the  
3 area. And virtually all of the farm land that you see  
4 on that aerial photograph we farm. And I will tell you  
5 that I also represent Mr. Wagner, Robert Wagner. And he  
6 fell and broke his tooth or something and said that he  
7 wouldn't be here tonight. But I was hoping he would be.

8 Probably my reactions to the proposed line --

9 CHMN. CHENAL: May I ask you --

10 MR. RAYNER: Yes, sir.

11 CHMN. CHENAL: -- Mr. Wagner's property is  
12 where?

13 MR. RAYNER: Basically --

14 CHMN. CHENAL: If you need a pointer, we can  
15 give you --

16 MR. RAYNER: Am I doing it right? Just the  
17 button. There it is.

18 Everything south of Broadway -- oops -- down to  
19 here, then over to there, then all the way down, so  
20 except for this cutout here, then over to Litchfield  
21 Road, so all of this, this ground in here, is  
22 Mr. Wagner's. We lease all of that from him, and have  
23 for many years. And we would like to continue farming  
24 there for some time.

25 I will just tell you that -- you see all those

1 four lines to the south of it. We owned that ground  
2 back when those lines were put in. And I will tell you,  
3 it was -- those were difficult times. I mean we didn't  
4 like to see them there. But, you know, they provide an  
5 obstacle that makes it really difficult to farm anytime  
6 that you have towers in the middle of a field.

7 And at least for the last couple of those lines,  
8 we at least talked to whoever it was that was putting it  
9 in, TG&E and the Bureau of Reclamation was the first  
10 one, and then a solar project, but at least we talked  
11 them into putting towers as close to the edge of the  
12 fields as they could, and that creates less of an  
13 obstacle.

14 But I will just tell you when you look at that  
15 piece of ground -- and I talked with Bob Wagner about  
16 this, and he is very concerned about, you know, social  
17 issues and for the public good. And he said, you know,  
18 if they need to put the lines up through there I guess,  
19 you know, we will take care of it. And he said I will  
20 take care of you on the lease if they cause you any  
21 damage.

22 And I said no, Bob, somebody else is going to  
23 pay me damages if they damage. You are going to have  
24 your property damaged because, you know, you don't have  
25 a very big area there. If that property ever gets

1 developed, can you imagine if you had that Alternate 2  
2 where you had four lines going up through there, trying  
3 to do any planning around that number of rights-of-way  
4 that you can never build anything under? I mean they  
5 might be good for a parking lot or storage of some kind.  
6 But, so he understands that.

7           And the other thing I told him, I said, you  
8 know, if this was for public necessity, people needed it  
9 to light their homes and everything, that would be one  
10 thing. But that's not -- this is a private enterprise.  
11 These guys need electricity to make money with. That's  
12 why they are building buildings and running electricity  
13 to it. So if anybody is going to shoulder the cost or  
14 some of the negative impacts, it ought to be the people  
15 that are building it that are the beneficiaries.

16           And I will tell you that for that reason, that's  
17 why I would like -- the Alternate 1, I think, does the  
18 least amount of damage to Mr. Wagner's property, and  
19 also to us as a grower. You know, even when you put a  
20 pole along the side of a field, every time you come up  
21 to that thing, you know, you have got dusters or  
22 sprayers that are 120 feet wide, and every time you come  
23 up to one of those things, you have got to do something  
24 different. You have got to stop, reel it in, go past  
25 it, put it back out.

1           If you do that once or twice, that's one thing.  
2   But I can tell you those lines down below, we have done  
3   that every time now for the last 30 or 40 years, and you  
4   do it seven or eight times a year every time you come up  
5   to that pole, you have got to do something different.

6           And you know what? It costs you money. It  
7   causes you a great deal of risk. We can't be sure that  
8   all people that operate our equipment are very  
9   observant. And because a lot of them have automatic  
10  controls on them now, I suspect that some of them nod  
11  off at times.

12           But, you know, it is an impediment, just leave  
13  it at that. But with that Alternate 1, at least you  
14  have the two main lines going on the edges of the  
15  property. And where the number 10 is that's along the  
16  Litchfield Road right-of-way, it can even be outside the  
17  field. The Buckeye Irrigation District owns that land  
18  over there. They are actually not doing anything with  
19  it right now. It is close to the river, probably has  
20  limited ability to do something with.

21           But I talked to them. They would be willing to  
22  have it on their property. Where it is marked No. 9,  
23  the only way, really, that I would approve having that  
24  is we have a -- right where that right angle corner is  
25  made between 9 and 10, we have a well right there. You

1 really don't want to put a power line right over the top  
2 of a well. So you have to be careful. That existing  
3 well that's there has the existing 69 and 12kV lines  
4 going over the top of it. But they are not right over  
5 the top of it; they are strategically located so they  
6 are out of the way.

7           If you can do that with the 230 and still use  
8 that same right-of-way, that would be the best  
9 alternative for us. Why? Because it is on the north  
10 side of the concrete irrigation ditch, so it is out of  
11 the way of the field. And it is -- that's right where  
12 the existing line is.

13           So if those lines can all be combined on that  
14 set of poles, great. Then you can go across, cross over  
15 the Park Davis line to enter the project. And to me  
16 that's the most fair way to treat that whole thing,  
17 because that number 14, the line, that connector line  
18 between the two substations, that goes on the  
19 beneficiaries' own land. So why shouldn't they have the  
20 disruption of having the power line go by? Have it on  
21 their land. That's where it ought to be.

22           I even brought up, when I was first approached  
23 on this, about running that number 10 on a long angle  
24 right at the corner, just go right across and cross the  
25 WAPA line just to the northwest a little bit of that

1 corner. But it is kind of indicated that there is some  
2 other technical problems with that, but...

3 So having that line that's marked as 9 is a, you  
4 know, is a good alternative as long as you don't have to  
5 put it in a new right-of-way south of Broadway, south of  
6 the ditch. Because then you are creating more obstacles  
7 and impediments. But if you can hang all three of those  
8 lines on that one line, that would be a, that would be a  
9 good thing.

10 One of the other things, you might look at that  
11 number one line there. You know, there is an existing  
12 power line going from Broadway to the south to a well.  
13 There is a pump right there, the corner of those fields.  
14 I don't know why that couldn't be hung on the other side  
15 of the poles there, too, if you can do that. I don't  
16 know if that's a 12kV line, if -- I don't know whether  
17 you can span them that far or not running those.

18 But anyway, they are old wooden pole lines that  
19 would just make sense to hang those wires on that  
20 same -- from those poles going back to Broadway where  
21 the 69 and 12kV lines are. So that's my pitch.

22 Number 2, no way, no how. It just doesn't make  
23 sense. Alternate 1 I think is the way to go. It causes  
24 the least disruption, and it puts the line where it  
25 ought to go, in between those on their own ground.

1 Thank you.

2 CHMN. CHENAL: All right. Thank you, sir.

3 Let me ask the applicant just some questions.

4 Segment No. 9, is that on the south or north side of  
5 Broadway, according to your proposal?

6 MR. SPITZKOFF: That's on the south side of  
7 Broadway.

8 CHMN. CHENAL: Okay. Thank you, sir, for your  
9 comments.

10 Anybody else who would like to speak?

11 Sir.

12 MR. BECKHAM: Sure. My name is David Beckham,  
13 and I own the property with a partner where your  
14 number 1 is, not the number 1 line, but the number 1  
15 itself. It is 40 acres, so I don't need to use the  
16 pointer.

17 And I have been talking back and forth with  
18 Brad, and he has done a good job of keeping me -- here  
19 let me do this -- keeping me in informed. My main  
20 comment is to make sure that line is simply far away  
21 from the residents that are on my property so they don't  
22 have any issues with the electromagnetic waves and all  
23 that type of thing, because they live there.

24 CHMN. CHENAL: Can you point with a pointer, a  
25 laser pointer, where the residents are on your property.

1 I don't see a house there.

2 MR. BECKHAM: It is right about there, same  
3 thing.

4 CHMN. CHENAL: By the black?

5 MR. BECKHAM: By the black. There you go. Now  
6 just look to the left. There is a residence there.

7 CHMN. CHENAL: Okay.

8 MR. BECKHAM: They have been there quite awhile.  
9 They actually work for the folks right here. But they  
10 are there, and we don't want to put them in any danger.

11 We talked about where to put that number 1 line,  
12 just keeping it far enough away that all your studies  
13 that are they are far enough away that those people  
14 don't get injured. And so that's what we have been  
15 talking about.

16 Anyway, I just wanted to make sure I have  
17 registered. Because if there is four owners here, I am  
18 one of the four.

19 CHMN. CHENAL: And you have put your information  
20 on the --

21 MR. BECKHAM: I am going to now, yeah.

22 CHMN. CHENAL: All right. Thank you very much,  
23 sir.

24 Member Woodall.

25 MEMBER WOODALL: I was wondering if the

1 applicant, during some of its presentation tomorrow,  
2 could address some of the proposed modifications to the  
3 route and/or structures that were raised by some of the  
4 public comments today. It would be helpful to me to  
5 understand that. I see nods. I see happy smiling  
6 faces.

7 MR. LARSEN: Yes, I think that's appropriate  
8 that we can do that.

9 MEMBER WOODALL: Thank you very much,  
10 Mr. Larsen.

11 MR. LARSEN: And especially in one that  
12 Mr. Beckham is talking, that's one of the stops and that  
13 is one of the things that we wanted to talk about.

14 MEMBER WOODALL: Great. Thank you so much.

15 CHMN. CHENAL: Very good. And I think a little  
16 more assistance with the well, and there is a  
17 work-around the first gentleman that was speaking --

18 MR. LARSEN: Yes. And I will just address that  
19 real quick, that I have been working with Mr. Rayner,  
20 and we have talked about that. And I think it would be  
21 appropriate to look at where the 69kV line is now in  
22 relationship to his well and talk about whether we can  
23 make the 230kV work there without further impacting  
24 that.

25 CHMN. CHENAL: Very good. I meant to say second

1 speaker. Yeah, that would be very helpful.

2 MR. LARSEN: And that is one of our stops.

3 CHMN. CHENAL: Are there any other speakers this  
4 evening?

5 Yes, Mr. Haenichen.

6 MEMBER HAENICHEN: I would like to thank the  
7 people who have -- I am sorry, I have got one more, but  
8 I would like to thank them. I learned a lot tonight.  
9 And that's why we do these sessions.

10 CHMN. CHENAL: Yeah. I think we all agree  
11 that's very important. We love to hear the comments,  
12 and it helps us with our deliberations, I can assure  
13 you.

14 Sir, if you give your name and --

15 MR. GARDNER: You bet. Mr. Chairman, members of  
16 the Commission, my name is Mike Gardner. I am here  
17 representing Microsoft. And I just wanted to, number  
18 one, thank you for the due diligence that you are  
19 putting forward. This is an amazing process. I can  
20 tell the hundreds of man-hours and the real  
21 thoughtfulness that's going into this. And from my  
22 Microsoft's perspective, we greatly appreciate it.

23 We don't have an opinion on the routes to take,  
24 but we do support APS in their desire to bring power to  
25 our data center.

1           The biggest problem we have so far with today's  
2 hearing is you have an Apple device with a Google map to  
3 talk about a Microsoft project. But we can talk about  
4 that later.

5           But it shows the importance where we are going  
6 with society and why the data center is critical. That  
7 Apple device didn't exist 10 years ago. Your iPhone  
8 didn't exist 11 years ago. And now the internet of  
9 things is everywhere. We use it all the time, and we  
10 just think it is a magical cloud someplace.

11           But that magical cloud is actually a data center  
12 that drives everything that we do, from our internet  
13 banking to how we drive around in cars. In fact, if you  
14 look up the internet of things, you will see a list of  
15 items that you never thought would be connected to the  
16 internet but are, from my ring doorbell to my front door  
17 lock to even tractors that help for farming. The  
18 internet of things is encompassing every aspect of our  
19 world.

20           In order for us to keep up with that demand, we  
21 need a sustainable data center that we are planning on  
22 building in Goodyear. And when I say sustainable, we  
23 are talking the most efficient from an energy  
24 perspective, as well as from a water perspective, of a  
25 data center that Microsoft has ever built. And they

1 want to build it here in Goodyear, Arizona. It is the  
2 latest technology and next generation that we think will  
3 do the community proud.

4           What we have seen historically is I had -- we,  
5 my firm does a lot of work with PayPal. PayPal used  
6 this phrase: Data centers are the train depot of the  
7 21st century, meaning back in the 1800s everyone fought  
8 for that train depot. Why? Because wherever the train  
9 depot came, that's where the commerce came around it.  
10 And we have seen that in Arizona so far.

11           When PayPal first came to Arizona, they started  
12 with a data center. Now they have 200 employees in  
13 Scottsdale and in Chandler. American Express, when they  
14 came to Phoenix, they started with a data center. Now  
15 there is a thousand employees that work for American  
16 Express.

17           Now, I can't guarantee what is going to happen  
18 with the Microsoft data center, but what we have seen so  
19 far is it creates additional jobs, creates additional  
20 taxpayers, which just creates additional value for the  
21 entire citizens of the State of Arizona.

22           So, Mr. Chairman, happy to answer any questions  
23 anybody might have about data centers. But thank you,  
24 is our overall message. Thank you for your due  
25 diligence and the time and your efforts that you are

1 putting into this.

2 CHMN. CHENAL: This is the opportunity for the  
3 Committee to ask the questions. I don't normally do it  
4 during public comment, but if the Committee has any  
5 questions.

6 Well, if we don't have any right now, I am sure  
7 we will think of some tomorrow. You may not be here,  
8 but the applicant will be. So we will -- one way or the  
9 other I think they will be getting with you or --

10 MR. GARDNER: They know how to reach me.

11 CHMN. CHENAL: -- we will directly.

12 MR. GARDNER: Mr. Palmer knows how to reach me  
13 as well. You have got to watch out for Mr. Palmer.

14 CHMN. CHENAL: Well, we actually have a couple  
15 questions. Member Hamway, and then Member Woodall.

16 MEMBER HAMWAY: So is noise an issue with these  
17 data centers?

18 MR. GARDNER: Mr. Chairman, it historically has  
19 been something that the company takes very seriously.  
20 But the way this, the offsets, the way we have worked  
21 with the City of Goodyear and the offsets and offset off  
22 the road, we don't believe that will be an issue on this  
23 particular data center.

24 CHMN. CHENAL: Member Woodall.

25 MEMBER HAMWAY: Okay.

1 MEMBER WOODALL: I am just going to suggest,  
2 Mr. Spitzkoff, that if you need to bone up anymore on  
3 data centers, there is your man.

4 Thank you very much.

5 MR. GARDNER: Thank you for your time.

6 CHMN. CHENAL: All right. Thanks very much,  
7 sir.

8 All right. That will -- any further questions  
9 or comments from the public?

10 (No response.)

11 CHMN. CHENAL: Well, that will conclude the  
12 public comment section of our hearing. I will ask the  
13 applicant to take custody of the sign-in sheet, and we  
14 will make sure that gets filed with Docket Control so  
15 that in the future if there is any, assuming a CEC is  
16 issued, if there is any changes to the CEC or  
17 extensions, we always have you notify the people that  
18 showed up at public comment. That's the information how  
19 you get ahold of them.

20 So unless there is anything further from the  
21 Committee, I don't think there is from the applicant, if  
22 there is nothing further, then we will adjourn the  
23 hearing this evening and we will meet here tomorrow at  
24 9:00 a.m. to reconvene.

25 MR. DERSTINE: Thank you.

1 CHMN. CHENAL: Thank you, everybody.  
2 (The hearing recessed at 6:16 p.m.)  
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1 STATE OF ARIZONA )  
2 COUNTY OF MARICOPA )

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

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

12 I CERTIFY that I have complied with the  
13 ethical obligations set forth in ACJA 7-206(F)(3) and  
14 ACJA 7-206 (J)(1)(g)(1) and (2). Dated at Phoenix,  
15 Arizona, this 29th day of September, 2019.

16 

17 \_\_\_\_\_  
18 COLETTE E. ROSS  
19 Certified Reporter  
20 Certificate No. 50658

21 I CERTIFY that Coash & Coash, Inc., has complied  
22 with the ethical obligations set forth in ACJA 7-206  
23 (J)(1)(g)(1) through (6).

24 

25 \_\_\_\_\_  
COASH & COASH, INC.  
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