

1 BEFORE THE ARIZONA POWER PLANT AND
2 TRANSMISSION LINE SITING COMMITTEE

3 IN THE MATTER OF THE APPLICATION OF) DOCKET NO.
4 RE PAPAGO LLC, IN CONFORMANCE WITH) L-21151A-21-0110-
5 THE REQUIREMENT OF ARIZONA REVISED) 00189
6 STATUTES 40-360, et seq., FOR A)
7 CERTIFICATE OF ENVIRONMENTAL) Case No. 189
8 COMPATIBILITY AUTHORIZING)
9 CONSTRUCTION OF THE RE PAPAGO SOLAR)
10 GEN-TIE PROJECT, WHICH CONSISTS OF A)
11 34.5/500KV GEN-TIE TRANSMISSION LINE)
12 INTERCONNECTING A PHOTOVOLTAIC SOLAR)
13 GENERATING FACILITY TO THE ADJACENT)
14 DELANEY SUBSTATION IN MARICOPA)
15 COUNTY NEAR SALOME HIGHWAY AND)
16 COURTHOUSE ROAD, APPROXIMATELY 5.5)
17 MILES WEST OF TONOPAH, ARIZONA)
18 _____)

12 At: Avondale, Arizona
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1 BE IT REMEMBERED that the above-entitled and
2 numbered matter came on regularly to be heard before the
3 Arizona Power Plant and Transmission Line Siting
4 Committee at the Hilton Garden Inn, 11460 West Hilton
5 Way, Avondale, Arizona, commencing at 1:04 p.m. on the
6 21st day of June, 2021.

7

8 BEFORE: THOMAS K. CHENAL, Chairman

9 ZACHARY BRANUM, Arizona Corporation Commission (via
10 videoconference)
11 LEONARD DRAGO, Department of Environmental Quality
12 JOHN RIGGINS, Arizona Department of Water Resources
13 JAMES PALMER, Agriculture Interests
14 MARY HAMWAY, Incorporated Cities and Towns
15 RICK GRINNELL, Counties (via videoconference)
16 KARL GENTLES, General Public (via videoconference)
17 JACK HAENICHEN, General Public
18 PATRICIA NOLAND, General Public

19 APPEARANCES:

20 For the Applicant:

21 MOYES SELLERS & HENDRICKS LTD.
22 By Mr. Jason Moyes
23 1850 North Central Avenue
24 Suite 1100
25 Phoenix, Arizona 85004

For Intervenor Ellwood Land Holdings, LLC:

OSBORN MALEDON, P.A.
By Ms. Meghan H. Grabel
2929 North Central Avenue
21st Floor
Phoenix, Arizona 85012

1 CHMN. CHENAL: Good afternoon, everyone. This
2 is the time set for the beginning of the hearing on the
3 RE Papago application.

4 My name is Tom Chenal, Chairman of the Power
5 Plant and Transmission Line Siting Committee.

6 May I have a roll call first, starting with
7 Member Noland, please.

8 MEMBER NOLAND: Patricia Noland appearing on
9 behalf of the public.

10 MEMBER HAMWAY: Mary Hamway representing cities
11 and towns.

12 MR. DRAGO: Len Drago representing Arizona
13 Department of Environmental Quality.

14 MEMBER PALER: Jim Palmer representing
15 agriculture.

16 MEMBER HAENICHEN: Jack Haenichen representing
17 the public.

18 MR. RIGGINS: John Riggins representing the
19 Arizona Department of Water Resources.

20 CHMN. CHENAL: You're on mute.

21 MEMBER GRINNELL: Some people like me better
22 muted.

23 Rick Grinnell representing the counties.

24 Can you hear me?

25 CHMN. CHENAL: Yes.

1 MEMBER GRINNELL: Okay.

2 CHMN. CHENAL: Thank you.

3 And we have one more Member appearing
4 virtually.

5 MEMBER BRANUM: Zachary Branum with the Arizona
6 Corporation Commission. Thank you.

7 CHMN. CHENAL: Thank you.

8 All right. May we have appearances, please.

9 MR. MOYES: Good afternoon, Chairman. My name
10 is Jason Moyes with the law firm of Moyes Sellers &
11 Hendricks here representing the applicant, RE Papago LLC.

12 CHMN. CHENAL: Ms. Grabel.

13 MS. GRABEL: Meghan Grabel of Osborn Maledon on
14 behalf of intervenor Ellwood Land Holdings, LLC.

15 CHMN. CHENAL: Very good.

16 So let's talk about a couple things first.

17 This hearing will probably take -- it might conclude by
18 tomorrow, certainly conclude by Wednesday.

19 There will be no tours. We'll have a flyover.
20 I still think it's not appropriate to have a tour as we
21 normally do, and I made that clear to the applicant.

22 We'll take breaks every 90 minutes for
23 everyone. It used to be for the court reporter, but I
24 can tell you it helps me too from time to time.

25 The first issue we should deal with is the

1 issue of intervention, which I don't believe is of right
2 in this case.

3 Ms. Grabel, if you want to kind of explain who
4 you represent and the reason you're seeking intervention,
5 and we'll deal with that.

6 MS. GRABEL: Certainly, Chairman. Thank you
7 very much.

8 My client, Ellwood Land Holdings, had another
9 interconnection project that it's developing that also
10 seeks interconnection to Delaney. As you know because
11 you have so many of these projects coming before you
12 suddenly, it's a rather congested area with a lot of
13 projects being built in that region.

14 And my client is interested in this matter
15 simply because we want to ensure, A, that the route
16 chosen doesn't interfere with their route and, second,
17 that they're able to find a cost-effective route given
18 where this project is being sited.

19 CHMN. CHENAL: Okay. So is there any
20 discussion regarding the issue of intervention by
21 Ms. Grabel's client?

22 (No response.)

23 CHMN. CHENAL: If not, may I have a motion,
24 please.

25 MEMBER PALMER: I move to accept the

1 intervention by Ellwood -- Ellwood, LLC.

2 MEMBER HAMWAY: Second.

3 CHMN. CHENAL: We have a motion and a second.

4 Any further discussion?

5 (No response.)

6 CHMN. CHENAL: If not, all in favor say "aye."

7 (A chorus of "ayes.")

8 CHMN. CHENAL: All right. Thank you.

9 I should ask if the applicant has any
10 objection.

11 MR. MOYES: No, Your Honor -- Mr. Chairman.

12 CHMN. CHENAL: I knew the answer to that.

13 Okay. All right. My understanding, again, we
14 always have meetings prior to this hearing. We have a
15 prefiling meeting where I meet with the applicant and we
16 discuss the project. And then after the application is
17 filed, I meet again just before the hearing, and we go
18 over procedural issues. And there were no procedural
19 issues in this case. And I understand that the testimony
20 and exhibits have been exchanged among the applicant and
21 the intervenor.

22 So are there any matters the Committee would
23 like to discuss before we start the opening statement
24 from the applicant and the intervenor?

25 (No response.)

1 CHMN. CHENAL: I'm looking at the roster, and I
2 don't see any.

3 So, with that, Mr. Moyes, if you would like to
4 take a few minutes to make your open statement, and then
5 we'll have Ms. Grabel follow.

6 MR. MOYES: Thank you, Chairman Foreman.

7 Good afternoon to you, Mr. Chairman and to all
8 of you Members. It's a pleasure for me to be here today
9 representing a project that I'm very proud to be a part
10 of.

11 My first experience with these line siting
12 matters began in 2014 with the Sun Streams case, back
13 when Judge Foreman was the Chairman. It's been a few
14 years, but I believe the last one of these that I did may
15 have been Chairman Chenal's first or one of his first as
16 the new chairman with the White Wing project in 2016.

17 We wish to express all of our appreciation for
18 Chairman Chenal's service to this Committee and to each
19 one of you Committee Members for being here today. We
20 understand that you have separate jobs and lives and
21 responsibilities, so we thank you for taking time out of
22 your busy schedules to help us with this project.

23 Most of my 16 years of practice have not been
24 in courtrooms, so I will be the first to admit to you
25 that the formalities of civil procedure aren't

1 necessarily my strong point. So I appreciate the
2 patience and tutelage of Chairman Chenal in that regard.

3 We've worked very hard to organize this case
4 for you today in an efficient and clean manner to
5 hopefully provide the appropriate record to support a
6 decision that grants the CEC for the RE Papago project.

7 I want to first introduce you to some of our
8 team members who will not be testifying. And I'll have
9 each of you stand up or wave your hand so the Committee
10 can get an idea of who you are

11 First, to my right, is my paralegal, Ms. Julie
12 Larsen. She's been a lifesaver for me, jumping into her
13 first-ever CEC proceeding here.

14 In the back, we have Brian Parker from Transcon
15 Environmental. Brian serves as the lead project manager
16 for Transcon. He's worked tirelessly not only for the
17 coordination of all of the environmental due diligence
18 for this project but all of the logistical details that
19 you see in front of you today with the hotel and
20 everything else and all the technology that we're able to
21 take advantage of today.

22 Helping Brian in the background and assisting
23 all of us, again, with this technology and our
24 presentations are some additional team members from
25 Transcon.

1 We have Stacey. I guess Stacey may have
2 stepped out. Oh, no, there you are, Stacey. We have
3 Stacey -- if I don't butcher your last name --
4 Mikulovsky.

5 And also Crystal Arthur is here from Transcon
6 helping in the background.

7 Also seated in the back with Brian and Stacey
8 is Christy Herron from Recurrent Energy. She is the
9 permitting manager for Recurrent.

10 I'll now introduce our witnesses, who you'll
11 actually be hearing from today.

12 First, at the end of the table, is Mr. Scott
13 Dawson. Scott is the director of permitting for
14 Recurrent Energy.

15 At the opposite end of the table is Ms. Marina
16 Solomon. Marina is the project development manager for
17 this project with Recurrent Energy.

18 And then, in the blue shirt, we have Mr. Dennis
19 Desmarais. He is the director of transmission for
20 Recurrent.

21 And last, but not least, is another witness who
22 I'm sure you're familiar with, Mr. Michael Warner, the
23 principal for Transcon Environmental.

24 CHMN. CHENAL: I didn't recognize Mr. Warner
25 without the bow tie. When I said business casual, I

1 didn't mean for him not to wear a bow tie. So I hope
2 tomorrow we see Mr. Warner in a bow tie. This doesn't
3 seem right.

4 MR. MOYES: Did I miss anybody?

5 (No response.)

6 MR. MOYES: Mr. Chairman, we only have four
7 witnesses today. Their testimony will not be lengthy.
8 This gen-tie project is very simple and very short, and
9 our case, likewise, will be simple and short.

10 Our essential evidence has been prefiled, and I
11 hope you've all had an opportunity to review the docketed
12 prefiled testimony, the exhibits, and, most importantly,
13 the application.

14 Our primary remaining task here today is to
15 review that evidence and then answer any questions you
16 might have. We'll try to that efficiently so we can
17 accomplish our objective and get everyone home without
18 spending too many days out here.

19 To that end, we'll appreciate your indulgence
20 from the Committee in trying try to hold questions until
21 the end of our witnesses. We will, of course, try to be
22 responsive whenever questions are asked. But sometimes
23 deferral until the later discussion may be the best
24 immediate answer to that question.

25 The applicant, RE Papago LLC, is wholly owned

1 by Recurrent Energy.

2 Mr. Dawson's testimony will be more
3 introductory about Recurrent and less evidentiary as to
4 the subject gen-tie project per se. Mr. Dawson will
5 share some information about depth and breadth of
6 Recurrent's premier position in today's solar energy
7 industry. His presentation will confirm the applicant's
8 experience and capabilities to complete the objectives of
9 this gen-tie project.

10 Second will be Ms. Marina Solomon, who will
11 review and supplement her prefiled written testimony in
12 which she identifies the location of this gen-tie project
13 and describes its very simple physical elements, which
14 are a substation and a very short gen-tie line. She will
15 also provide some background information for the benefit
16 of the Committee on the actual solar generation and
17 storage facility that will be interconnected through this
18 gen-tie project. And, lastly, she'll address some of the
19 marketing efforts and the need for this gen-tie project
20 to connect it to the grid.

21 Mr. Dennis Desmarais will briefly review his
22 prefiled written testimony as well, in which he addressed
23 the transmission System Impact Studies and the
24 contractual interconnection agreements which will allow
25 this gen-tie project to be connected to the Delaney

1 Substation and, therefore, the regional grid. And he'll
2 also discuss the safety and reliability issues and
3 describe how this project will be able to be
4 interconnected in Arizona without any adverse impacts on
5 the Arizona transmission system.

6 Finally, Mr. Michael Warner will supplement his
7 prefiled written testimony and offer some concluding
8 remarks which confirm the support of findings with
9 respect to the statutory environmental compatibility
10 factors that the Committee is required to consider when
11 granting a CEC for a gen-tie and substation like ours.
12 He will also briefly explain the public outreach efforts
13 and our responses to those.

14 Our witnesses today will be using some
15 PowerPoint slides that you'll see in front of you. You
16 all should have a printed copy of those PowerPoints as
17 well if you would like to look at those in person up
18 close.

19 We've had some technical issues this morning in
20 terms of the tablets that are in front of you. We'll be
21 displaying the Zoom meeting so that you can see and
22 interact with other Committee Members who aren't here in
23 person. Unfortunately, we were not able to have on those
24 tablets all of the exhibits like you may have been
25 accustomed to, but there are laptops in between all of

1 you.

2 For those who want to review a particular
3 exhibit as we are admitting those into evidence, those
4 all are loaded on those laptops. There are also a couple
5 of hard copies with all of those exhibits in binders if
6 you so wish to review them, and the Chairman has one of
7 those in front of him.

8 In summary, Mr. Chairman, because of its
9 location and its very simple components, we believe it is
10 self-evident that the RE Papago gen-tie project will be
11 virtually homogeneous with and clearly compatible with
12 both the site-specific and overall surrounding
13 environment. We're confident that you will agree and
14 that we can efficiently work together to confirm that
15 conclusion and issue the requested certificate.

16 Thank you.

17 CHMN. CHENAL: Thank you. Good luck with the
18 Committee holding their questions, though. I've never
19 seen that, and I hope they ask questions when they want
20 to ask them because sometimes you forget if you wait too
21 long.

22 Okay. Next.

23 MS. GRABEL: Thank you, Chairman and Members of
24 the Committee. Again, Meghan Grabel of Osborn Maledon on
25 behalf of Ellwood Land Holdings, LLC.

1 As I mentioned earlier in my remarks regarding
2 intervention, Ellwood is developing a solar and battery
3 energy storage project near the RE Papago site that will
4 also interconnect at APS's Delaney Substation, which, as
5 you know, is a critical node in the Southwest electric
6 grid.

7 The general location of the Ellwood project is
8 conceptually drafted in Ellwood Exhibit A and was earlier
9 filed in the docket late last week.

10 Ellwood is currently in the process of
11 contracting its project's output to offtakers in Arizona,
12 which means that time is of the essence to my client to
13 determine its own access point into Delaney and to secure
14 the appropriate rights for it. To that end, Ellwood has
15 reached out to RE Papago on several occasions in an
16 attempt to coordinate bypass and secure whatever
17 easements might be necessary from RE Papago to move
18 forward with Ellwood's project.

19 Although progress has been made, it has been
20 slower than my client desired. Ellwood intervened in
21 this proceeding to ensure that the requisite coordination
22 between my client and RE Papago will continue in a timely
23 manner and preserve the financial viability of Ellwood's
24 project. To accomplish that objective, Ellwood proposed
25 certain conditions to the RE Papago CEC in its Motion to

1 Intervene.

2 Over the past several days, Ellwood and
3 RE Papago have refined these conditions into a single
4 condition that satisfies both of our interests. The
5 language that we agreed to is contained in Ellwood
6 Exhibit B, which is also in front of you. Essentially,
7 it requires RE Papago to use its best efforts to reach
8 and execute a final easement agreement with Ellwood
9 within 30 days of approval of the CEC.

10 We very, very much thank RE Papago for working
11 with us. In giving this project progress, rather,
12 Ellwood will not present any witnesses nor engage in
13 cross-examination. We will merely observe and answer any
14 questions that the Committee might have of us.

15 Thank you very much.

16 CHMN. CHENAL: Thank you. And, Ms. Grabel, I
17 think it would be helpful if the Committee -- not
18 necessarily right now -- but gets to see the exhibit and
19 maybe gets a little explanation from you of the concern
20 that your client has because of the congestion in the
21 area. Or maybe Mr. Moyes can put that testimony on.

22 MS. GRABEL: Certainly.

23 CHMN. CHENAL: I find that helpful to see that.

24 Also, another housekeeping item. I sent a
25 standard letter to the Corporation Commission Legal Staff

1 to have their technical people kind of review these
2 projects, and I did get a response.

3 And normally, the letter is -- requests a
4 condition or two or three and makes comments -- important
5 comments on the project. In this case, it came back and
6 it asked the Committee to actually ask of the applicant
7 to get into a discussion and get on the record some
8 questions that the Staff had.

9 And so, Mr. Moyes, I'm not sure how you'd like
10 to work that in, but I think if you could work that in
11 through your witnesses at the appropriate time, I think
12 that would be helpful. And that letter will become
13 Chairman's Exhibit 1. And that's a letter that you're
14 familiar with from the Staff.

15 MR. MOYES: Thank you, Mr. Chairman. We are
16 prepared to discuss that letter, and our witness
17 Mr. Desmarais will be specifically discussing the letter
18 and our plan in response to it. So when we get to him as
19 a witness, we will admit that.

20 CHMN. CHENAL: Perfect. Okay.

21 MS. GRABEL: Mr. Chairman, may I just --

22 CHMN. CHENAL: Yes.

23 MS. GRABEL: I'm being told that my microphone
24 isn't on for those who are listening through the Zoom
25 link, so my clients are unable to hear me. They can hear

1 me through other microphones.

2 Should I move?

3 MR. MOELLER: We just fixed that issue.

4 MS. GRABEL: Okay. Thank you.

5 MR. MOYES: And, Mr. Chairman, if I may, I
6 would be remiss -- going back to our introductions, I
7 failed to introduce our highly capable technical team
8 from Peaks Audio. We have Mr. Jason Moeller and Mike
9 Fish, who have been very helpful under some difficult
10 circumstances this morning in getting this technology set
11 up for us.

12 CHMN. CHENAL: Like when all the power cut out
13 to the room.

14 MR. MOYES: Precisely.

15 CHMN. CHENAL: That technical problem. Good.

16 Well, unless there's any matters we should
17 discuss before, if you're ready to proceed, Mr. Moyes, we
18 can swear your witnesses in -- witness or witnesses in,
19 whichever you prefer, and we can turn it over to you for
20 your case.

21 MR. MOYES: Mr. Chairman, would you prefer us
22 to handle some of the procedural matters in terms of
23 admitting exhibits that won't necessarily be discussed by
24 witnesses but ...

25 CHMN. CHENAL: We'll do that at the end. Let's

1 just take care of the exhibits at the end.

2 MR. MOYES: Sounds good.

3 CHMN. CHENAL: So tell me which witness will be
4 your first one. Or if it's going to be a panel, I can
5 swear the witness or witnesses in at this time.

6 MR. MOYES: We won't have any panels,
7 Mr. Chairman. Would you like to swear all the witnesses
8 at once or as they go individually?

9 CHMN. CHENAL: Let's do it individually.

10 MR. MOYES: Our first witness will be Mr. Scott
11 Dawson.

12 CHMN. CHENAL: Mr. Dawson, would prefer an oath
13 or an affirmation?

14 MR. DAWSON: How about an oath.

15

16 SCOTT DAWSON,
17 called as a witness herein, having been first duly sworn
18 by the Chairman to speak the whole truth and nothing but
19 the truth, was examined and testified as follows:

20

21 DIRECT EXAMINATION

22 BY MR. MOYES:

23 Q. Thank you, Mr. Dawson.

24 Would you please state for us on the record
25 your name.

1 A. Scott Dawson, D-a-w-s-o-n.

2 Q. Mr. Dawson, by whom are you employed, and what
3 is your official capacity?

4 A. I'm employed by Recurrent Energy, and my title
5 is director of permitting.

6 Q. And, Mr. Dawson, you should have in front of
7 you and have seen a copy of the prefiled testimony
8 summaries that were submitted and marked for the court
9 reporter as Exhibit RE-20. Was that written testimony
10 summary prepared under your direction?

11 A. Yes, it was.

12 MR. MOYES: And, Mr. Chairman, I will avow that
13 Mr. Dawson's testimony summary was docketed and delivered
14 to you electronically on June 11th, in accordance with
15 your Procedural Order of May 14th, and copies have been
16 provided -- or marked under the Tab RE-20, Mr. Chairman.

17 CHMN. CHENAL: Thank you.

18 Q. BY MR. MOYES: Mr. Dawson, did you include as
19 an attachment to your written testimony some biographical
20 information about yourself?

21 A. Yes, I did.

22 Q. Would you please review the highlights of your
23 professional credentials for the benefit of those who may
24 not have had an opportunity to review those.

25 A. Sure.

1 I have an undergraduate degree, a Bachelor of
2 Science in economics, from New Mexico State University.
3 I also have a Master of Science in natural resources
4 management from Utah State University.

5 I've got 12 years of experience in the solar
6 energy industry, including seven and a half with a very
7 good Arizona company, First Solar, and I was on the White
8 Wing siting case back when we did that. And 27 years,
9 generally, in the environmental field.

10 Q. Thank you, Mr. Dawson.

11 Would you now please describe for us the
12 background and experience of the applicant itself,
13 RE Papago LLC, as well as its parent company, Recurrent
14 Energy.

15 A. Certainly.

16 Recurrent Energy was founded in 2006. Its
17 current headquarters are in Walnut Creek, California,
18 which is in the San Francisco Bay Area.

19 Recurrent is one of the leading solar energy
20 and battery storage developers with over 4 gigawatts of
21 solar projects and over 9 gigawatt-hours of battery
22 storage projects in its development portfolio.

23 In 2015, Recurrent was acquired by Canadian
24 Solar, which is a manufacturer of solar modules and also
25 a developer of solar and storage projects globally.

1 Canadian Solar has more than 1,400 employees and has
2 manufacturing facilities across the globe. Canadian
3 Solar also has a portfolio of over 20 gigawatts of solar
4 projects and 18 gigawatt-hours of storage projects
5 globally.

6 Recurrent Energy is its North American
7 development arm. Canadian Solar has a market
8 capitalization of \$2.3 billion. Recurrent's project
9 portfolio is mainly in the southern tier of the United
10 States, as you can see in the slide on the right. We
11 also do have projects in Canada, and we're always
12 expanding into new states and markets.

13 Currently, Recurrent has developed more than 2
14 gigawatts of operating utility solar projects.

15 Q. Thank you, Mr. Dawson.

16 Do you have anything additional you wish to add
17 to your testimony?

18 A. No, that is it.

19 MEMBER HAENICHEN: Mr. Chairman.

20 CHMN. CHENAL: Member Haenichen.

21 MEMBER HAENICHEN: I'm wondering what is meant
22 by the phrase "late-stage batteries."

23 MR. DAWSON: Late-stage projects generally are
24 further along in the development process. So they have a
25 site, they've got interconnection, they've got real

1 estate to build a project on, possibly some permits. So
2 it's -- late stage, it's getting ready to go into
3 construction.

4 MEMBER HAENICHEN: Thank you.

5 MR. MOYES: Mr. Dawson is, of course, available
6 for any other questions the Committee Members have at
7 this time, despite my request to hold questions, for
8 which I sincerely apologize.

9 CHMN. CHENAL: They're going to have some
10 questions no matter what you or I say. That's the way it
11 should be.

12 Okay. Thank you.

13 Thank you, Mr. Dawson.

14 MR. DAWSON: Thank you.

15 MR. MOYES: Our next witness will be Ms. Marina
16 Solomon.

17 CHMN. CHENAL: Ms. Solomon, would you prefer an
18 oath or an affirmation?

19 MS. SOLOMON: I'll do an oath.

20 CHMN. CHENAL: All right.

21

22

23

24

25

MARINA SOLOMON,

1 called as a witness herein, having been first duly sworn
2 by the Chairman to speak the whole truth and nothing but
3 the truth, was examined and testified as follows:

4

5

DIRECT EXAMINATION

6 BY MR. MOYES:

7 Q. Thank you, Ms. Solomon for being here today.

8 Would you please state your full name for the
9 record.

10 A. Marina Solomon.

11 Q. And can you spell that for the court reporter.

12 A. M-a --

13 Q. Just the last name.

14 A. Oh, just the last name. S-o-l-o-m-o-n.

15 Q. And by whom are you employed and what is your
16 official title, Ms. Solomon?

17 A. I'm employed by Recurrent Energy, and my title
18 is development manager.

19 Q. Now, you should have in front of you a copy of
20 the CEC application in this case, which has been marked
21 for the court reporter as RE-24. Was that application
22 prepared under your direction, Ms. Solomon?

23 A. It was.

24 Q. Are you aware of any corrections that need to
25 be made to that application?

1 A. No.

2 MR. MOYES: Mr. Chairman, if appropriate, I'd
3 move for the admission of RE-24 at this time. Or we can
4 defer that all to the end if you'd like.

5 CHMN. CHENAL: Let's do them all at the end.
6 It's easier to review them at one time.

7 Q. BY MR. MOYES: Similarly, Mrs. Solomon, you
8 should also have a copy of an exhibit marked RE-17, which
9 were the Ten Year Plans filed for this case.

10 Can you describe your role in the preparation
11 of those Ten Year Plans.

12 A. I participated in the preparation of those
13 plans and reviewed them before they were finalized and
14 submitted to the Committee.

15 MR. MOYES: And I can avow for the record,
16 Mr. Chairman, that the original Ten Year Plan was filed
17 by me with Docket Control on February 1st of 2019 a
18 supplemental revision to that plan was filed on April 6th
19 of 2020.

20 The second plan came about right when the COVID
21 shutdown had begun, and Docket Control was, to our
22 understanding, not accepting any in-person filings. That
23 second revised Ten Year Plan was submitted to your Line
24 Siting assistant at the time, Mrs. Marie Cobb.

25 CHMN. CHENAL: Let's have Ms. Solomon provide

1 that testimony and then explain what was in the Ten Year
2 Plan and how this project was -- what part of the project
3 was described. Let's just lay the foundation for what
4 was in the Ten Year Plan.

5 Q. BY MR. MOYES: Ms. Solomon, can you describe
6 for us the initial Ten Year Plan that was filed in 2019
7 and then what was changed in the later filing and why
8 that was necessary for us.

9 A. Sure. So the initial Ten Year Plan we
10 submitted indicated some alternate routes that were later
11 ruled out once we obtained further site control for the
12 project.

13 So, initially, we had shown routes that went
14 through Arizona State lands and entered Delaney from the
15 south, but we subsequently were able to secure site
16 control for the parcel that wraps around Delaney
17 Substation to the east and the north -- or, rather, to
18 the west and the north. And that simplified our route
19 into the substation, so we refiled the plans with those
20 alternate routes removed.

21 CHMN. CHENAL: So the Ten Year Plan included
22 both the solar plant and the substation and the gen-tie
23 line; is that correct?

24 MS. SOLOMON: I think the focus was the project
25 substation and gen-tie line.

1 CHMN. CHENAL: Okay. Did that include the
2 solar plant?

3 MS. SOLOMON: I don't think so.

4 CHMN. CHENAL: And I see on the right screen up
5 there, a map -- or a picture. Can you describe what that
6 is.

7 MS. SOLOMON: Yeah. So these are the two
8 alternate gen-tie and project substation alignments that
9 we are presenting. Our preferred route and the route
10 that is the most straightforward goes kind of directly to
11 the west of Delaney Substation, and the gen-tie line
12 proceeds straight east-west. That's the shortest
13 possible distance and only contains three structures.

14 The alternate route does include a turning
15 structure into the substation, but our hope would be to
16 go with the base case route on the left there.

17 CHMN. CHENAL: Right. And were these -- were
18 these addressed in the Ten Year Plan?

19 MS. SOLOMON: Yes, I believe so.

20 Is that right, Jason?

21 MR. MOYES: Yes. And as a reminder, the Ten
22 Year Plan filings for a solar generation facility, the
23 voltage output of those facilities does not qualify and
24 meet the jurisdictional requirements of the Line Siting
25 Committee.

1 So, to answer your question, the solar project
2 itself was not included in the Ten Year Plan. However,
3 because the gen-tie facility does step up the voltage to
4 a level that meets that jurisdictional requirement, it
5 only entails the substation and the gen-tie facilities in
6 the Ten Year Plans.

7 CHMN. CHENAL: Right.

8 Q. BY MR. MOYES: Okay, Mrs. Solomon. Moving on
9 to your actual prefiled testimony at this point. You
10 should have in front of you a copy of your prefiled
11 testimony marked as Exhibit RE-21. Was that testimony
12 prepared by you or under your direction?

13 A. Yes.

14 MR. MOYES: Actually, I skipped ahead one step,
15 Mr. Chairman.

16 Q. BY MR. MOYES: Ms. Solomon, you also provided
17 with your testimony some biographical information. Would
18 you, for the benefit of the Committee Members, briefly
19 summarize your professional background as well.

20 A. Sure. So I have eight years of experience in
21 utility scale solar development and several years'
22 experience in battery storage energy project development.
23 I've been with Recurrent Energy for three years.

24 My bachelor's degree is from Brandeis
25 University in international studies, Spanish, and a minor

1 in environmental studies; and my master's degree is from
2 New York University with an M.S. in global affairs with a
3 focus on energy and environmental policy.

4 Q. Thank you.

5 And that information was attached as Attachment
6 1 to your prefiled testimony; is that correct?

7 A. Yes.

8 Q. Now, moving to the testimony itself.

9 Do you have any corrections or changes that you
10 wish to make to your written testimony?

11 A. I do not.

12 Q. And, Ms. Solomon, if I were to ask you the same
13 questions that are presented in that written testimony,
14 would your answers here today under oath be the same?

15 A. They would.

16 Q. Thank you.

17 For the benefit, again, of those who may not
18 have had an opportunity to review that full written
19 testimony, would you please briefly summarize the main
20 points of that for us, Ms. Solomon.

21 A. Sure. Just a moment.

22 So we're here before the Committee today to
23 request approval for our gen-tie line and project
24 substation for the RE Papago solar and storage project.
25 It's a 300-megawatt AC alternating current project

1 located 5.5 miles due west of Tonopah.

2 And other landmarks to mention -- so Tonopah is
3 over here. Other landmarks to mention are I-10, which
4 runs right here along the project. The project footprint
5 is generally depicted here. Saddle Mountain is located
6 about 2.5 miles due south, and the Harquahala generating
7 facility gas plant out there is located a mile due to the
8 west of our project footprint. West Salome Highway, you
9 can see here, cuts through our site, and Indian School
10 Road also bisects the site.

11 In terms of details on the gen-tie project, we
12 anticipate that it would consist of up to four
13 structures. And those structure types would be A-frame
14 deadend structures at each end of the line, with the
15 first structure being here within our project substation
16 and the other at the other end within Delaney Substation,
17 which is an APS-controlled substation.

18 The intermediate structures, we presented three
19 structure types that are possibilities and would be
20 finalized when further engineering is completed. Those
21 three structure types are an H-frame structure, a
22 three-pole structure, or a monopole-type structure.

23 CHMN. CHENAL: Excuse me. Do you have some
24 slides that reflect what these look like?

25 MS. SOLOMON: Yes. One moment.

1 So these are the three intermediate structure
2 types. So the first one on the left is the monopole, the
3 middle one is the H-frame, and the one on the right is
4 the three-pole.

5 And those structure types would be up to 140
6 feet tall, the length of the gen-tie line would be up to
7 .3 miles, and the voltage would be 500 kV.

8 CHMN. CHENAL: Are you able to pull up
9 Exhibit RE-17, please. That's the Ten Year Plan. I just
10 had a question.

11 MS. SOLOMON: Okay.

12 CHMN. CHENAL: RE-17.

13 I think, Mr. Moyes, all of your exhibits should
14 be shown to the Committee at some point and discussed.

15 We went through the Ten Year Plan pretty
16 quickly, but we should have your witness go through each
17 one so we lay the foundation for it. So I'd like to go
18 back to the Ten Year Plan.

19 MS. SOLOMON: Okay.

20 CHMN. CHENAL: I'd like to see it on the
21 screen.

22 MS. SOLOMON: I don't think we have a slide on
23 that.

24 MR. MOYES: All of the material on the laptops
25 should be on there, Mr. Chairman, including RE-17.

1 Jason, if you have the original thumb drive,
2 are you able to pull that up?

3 Would it be appropriate to take a quick recess,
4 Mr. Chairman?

5 CHMN. CHENAL: That would be fine. I think
6 every exhibit you want to introduce should be shown to
7 the Committee and have a little testimony on it.

8 MR. MOYES: Again, I apologize for the
9 technical complications we had. It was anticipated that
10 we would have all of those exhibits for your viewing on
11 your individual tablets, which didn't work out the way we
12 had hoped. But the laptops that are in between do have
13 those on there, and we'll get those up on the screen.

14 It looks like we've got them. If we can scroll
15 down. That first page is just a cover sheet notice of
16 the filing. So this first part here would be the
17 original in your plan, if we're ready to go back on the
18 record.

19 CHMN. CHENAL: So the question I have is the
20 Ten Year Plan talks about up to 1.8 miles of transmission
21 lines, and the project application has 0.3. And I'm just
22 curious why -- that's kind of a big difference, and what
23 was the reason for that?

24 MS. SOLOMON: As I touched on earlier, it was
25 because, in that interim period between when the first

1 Ten Year Plan was filed and when we submitted the amended
2 Ten Year Plan, we were able to secure site control of the
3 parcel that wraps around Delaney Substation to the west
4 and to the north. And so that has enabled our project to
5 be able to site our gen-tie line and project substation
6 directly next to Delaney Substation.

7 CHMN. CHENAL: So do you have a map that
8 shows -- a slide that shows the solar project and the
9 substation and how that ties in?

10 MS. SOLOMON: Yes.

11 CHMN. CHENAL: Okay. I'm just looking for an
12 overview, and then you can come back and fill in the
13 testimony.

14 MS. SOLOMON: So this area shown in yellow on
15 the slide to the right is our project footprint off the
16 land that we have under site control for our solar
17 project.

18 The Delaney Substation is located right there,
19 and the gen-tie line is this short span down here. So
20 initially, for that Ten Year Plan that we filed in 2019,
21 we were planning a gen-tie line that routed along here
22 because we didn't have these parcels under site control.
23 But we subsequently were able to secure those parcels,
24 and, thus, our line could be shortened.

25 CHMN. CHENAL: Now I understand.

1 MEMBER HAENICHEN: Mr. Chairman.

2 CHMN. CHENAL: Yes, Member Haenichen.

3 MEMBER HAENICHEN: I don't know if I missed
4 this or not, but where -- I know it's not part of this
5 project, but where would the proposed solar field be of
6 the collectors? Could you show that with your pointer?

7 MS. SOLOMON: So this yellow area would be
8 where all our solar panels would be built.

9 So this area here is our solar project outline.
10 Does that help?

11 MEMBER HAENICHEN: Yeah. It's just a little
12 funky, but ...

13 MS. SOLOMON: There are some oddly shaped
14 parcels out there.

15 Q. BY MR. MOYES: Ms. Solomon, maybe for Member
16 Haenichen's benefit, you could describe why there's that
17 diagonal break in the site area for the solar generation
18 and what that area depicts.

19 A. This area between here, this is land that's
20 owned by the Flood Control District of Maricopa County,
21 and they do have a flood-retarding structure or dam
22 that's located here, which we would not be able to build
23 upon, so we plan to construct a 34.5 kV collection line
24 that would connect this area of the project site to the
25 rest of the site.

1 MEMBER HAENICHEN: Is that part of this
2 application, the 34 kV?

3 MS. SOLOMON: It's not. But we have --

4 MEMBER HAENICHEN: Just because of the voltage
5 being low?

6 MS. SOLOMON: That's right. And we have been
7 in contact with the flood control district, and they seem
8 to be amenable to us building on their property.

9 MEMBER HAENICHEN: If you can show us where and
10 what portion of the solar generating field itself the tie
11 to the substation will be located.

12 MS. SOLOMON: This small box here is the
13 project substation, and the gen-tie line is right here.
14 It's a little hard to see on this picture, but maybe we
15 can go back.

16 MR. MOYES: I should mention that all of you
17 have in front of you a placemat that's probably easier to
18 see than probably looking at these screens far away. On
19 the placemat, you will find on the front left is a
20 depiction of the structures. Front right half is a
21 broader zoomed-out map of the location project -- or the
22 project location.

23 But if you flip over the placemat, you can see
24 up close what's on the screen now, which is a depiction
25 of the actual gen-tie project that we're here for.

1 The question was asked about whether the other
2 34.5 line that Mrs. Solomon described would be part of
3 this project. And just as a reminder to the Committee,
4 the legal jurisdictional voltage limit which triggers the
5 need for a CEC is 115 kV or above.

6 MEMBER HAENICHEN: So, on this placemat, the
7 left-hand preferred configuration, that blue line is the
8 high-voltage line that this project is all about?

9 MR. MOYES: That's correct.

10 MEMBER HAENICHEN: And how long is that piece?

11 MS. SOLOMON: The line would be up to 0.3 miles
12 in length. And the yellow box there is the footprint of
13 our proposed substation.

14 MEMBER HAENICHEN: Thank you.

15 MR. MOYES: Would it be helpful for Marina or
16 any of our witnesses to describe the interplay between
17 the voltage of the generation site itself and the step-up
18 of that voltage for the gen-tie project, Mr. Chairman?

19 CHMN. CHENAL: Absolutely. Yeah, absolutely.

20 Q. BY MR. MOYES: Could you please describe the
21 differences between those, Marina, and why the CEC is
22 necessary for the gen-tie itself from the substation and
23 not necessarily for the rest of the generation project.

24 A. So the gen-tie line is at a voltage of 500 kV,
25 which is compatible with the voltage of the Delaney

1 Substation, where we would be interconnecting into the
2 grid. So it's necessary for us to step up the voltage
3 from our generating facility.

4 We initially kind of start at a low voltage
5 when we're at the feeder level for our solar site. The
6 voltage is then stepped up to a medium voltage of
7 34.5 kV, and collection lines at that 34.5 kV voltage run
8 through our site and collect the power and bring it to
9 the project substation, where transformers transform that
10 power from the medium voltage up to 500 kV so that the
11 grid can accept our power.

12 MEMBER HAENICHEN: Mr. Chairman.

13 CHMN. CHENAL: Member Haenichen.

14 MEMBER HAENICHEN: The energy coming out of the
15 solar panels is DC, direct current, correct?

16 MS. SOLOMON: Correct. But it's converted to
17 AC power.

18 MEMBER HAENICHEN: That's my question. Where
19 does it take place and at what voltage?

20 MS. SOLOMON: In my testimony, I describe how
21 each -- so each increment of our solar facility is built
22 in 2-megawatt blocks, typically, then an inverter
23 transformer station constructed on a concrete pad or
24 steel skid. Then those inverter transformer stations
25 would contain a DC combiner, and those would collect the

1 DC electrical power from the TD modules, up to four
2 inverters, a transformer and an auxiliary power
3 transformer. The power produced by the PV panels would
4 then be converted from DC to AC at the inverter
5 transformer station. And then at that point, they're
6 stepped up to the medium.

7 MEMBER HAENICHEN: At what physical point does
8 that conversion from DC to AC take place?

9 MS. SOLOMON: That would be out at each block
10 within our solar facility. So all over the site,
11 basically.

12 So we've got a total of 300 megawatts AC for
13 our solar project, and it would be built in 2-megawatt
14 blocks. So all throughout our site, the power would be
15 converted from DC to AC.

16 MEMBER HAENICHEN: Okay. So that conversion,
17 when it becomes AC, which it has to be at the end of the
18 day in order to get into the grid, that is taking
19 place -- that conversion from DC to AC, does it all take
20 place for the entire solar field at one spot, or are
21 there some intermediate spots?

22 MS. SOLOMON: No. At spots throughout the
23 site, basically.

24 MEMBER HAENICHEN: At what voltage? DC
25 voltage?

1 MS. SOLOMON: Do you know, Dennis?

2 MR. DESMARAIS: Typically, these days, it's
3 1500 volts DC, and the inverter converts it to 34.5 --
4 with the transformer to 34.5000 volts.

5 MEMBER HAENICHEN: Yeah.

6 Q. BY MR. MOYES: So it's fair to say,
7 Mrs. Solomon, that the type of conversion that
8 Mr. Haenichen is asking about all takes place external of
9 the substation and the gen-tie project which this
10 certificate --

11 A. That's correct.

12 CHMN. CHENAL: Member Noland.

13 MEMBER NOLAND: Thank you, Mr. Chairman.

14 Ms. Solomon, do you know how many converters
15 there are going to be on the site? Do you have an idea?
16 This is the first time we've really dealt or heard about
17 that, and I've been seeing it in other places.

18 MS. SOLOMON: Uh-huh.

19 MEMBER NOLAND: There are quite a few, aren't
20 there?

21 MS. SOLOMON: Yeah, there would be quite a few.

22 MEMBER NOLAND: I'm not going to hold you to
23 it. Give me an estimate.

24 MS. SOLOMON: I think it would be a converter
25 for each 2 megawatts, so that would be 150.

1 MEMBER NOLAND: 150.

2 MS. SOLOMON: Uh-huh.

3 MEMBER NOLAND: Okay. Thank you.

4 MEMBER HAENICHEN: At what voltage does that
5 take place, the inversion?

6 MS. SOLOMON: 1500 volts.

7 MEMBER HAENICHEN: And then what happens next?
8 When do you get to the point where we have to vote on it?

9 MS. SOLOMON: So these -- we're starting at
10 1500 volts. And then that's stepped up to the medium
11 voltage, and that happens at those 2-megawatt blocks
12 distributed throughout the entire solar site. And then
13 there are collection lines at 34.5 kV that are routed
14 throughout our project site. And those collection lines
15 all terminate at our project substation, which is the
16 beginning of where the request before you today is -- the
17 scope of that is the project --

18 MEMBER HAENICHEN: So these are all coming at
19 the same voltages, but you're going to put them all in
20 parallel and store at 34.5 kV. Is that right? DC?

21 MR. DESMARAIS: AC.

22 MEMBER HAENICHEN: When does it become AC prior
23 to that? Where? Where does that happen?

24 MS. SOLOMON: Throughout the project site at
25 each 2-megawatt block. So in multiple locations

1 throughout the site.

2 MEMBER HAENICHEN: So the 2-megawatt blocks,
3 when it leaves there, it's AC; is that correct?

4 MS. SOLOMON: Yes.

5 MEMBER HAENICHEN: And then where does the
6 final step up to where this Committee starts to become
7 interested?

8 MS. SOLOMON: That's at the project substation,
9 which is depicted here. And that's where all of those
10 34.5 kV lines that I just mentioned will terminate, and
11 there will be transformers within that project substation
12 that would step up the voltage from 34.5 kV to 500 kV so
13 that the gen-tie line and Delaney Substation can hook up
14 to the power.

15 MEMBER HAENICHEN: That's what I wanted. Thank
16 you.

17 CHMN. CHENAL: So I just want to -- Mr. Moyes,
18 I just want to kind of make sure we're on the same page.

19 Every exhibit I think needs to be shown on the
20 screen and reviewed by the witnesses to lay the
21 foundation. And the testimony they filed is really for
22 the benefit of any other party so there's no surprises,
23 but we need to hear the testimony live.

24 MR. MOYES: Sure.

25 CHMN. CHENAL: So please don't assume that

1 because testimony's been filed that we're aware of it or
2 that somehow it's judicial notice of it. We need to hear
3 everything that is in that testimony live at the hearing.

4 MR. MOYES: Understood.

5 CHMN. CHENAL: So I don't know where we were
6 with Ms. Solomon's testimony because you jumped around,
7 but I do remember something of the monopoles and the
8 structures up there. I think that's slide 18 or
9 something like that.

10 And maybe there was some additional testimony,
11 but then I heard Ms. Solomon refer to her testimony, and
12 she got very technical for a moment. But if that's in
13 her testimony, I think that needs to be developed here
14 because that was a mouthful of testimony that -- I need
15 to have that dumbed down.

16 MS. SOLOMON: Sure.

17 CHMN. CHENAL: Member Haenichen.

18 MEMBER HAENICHEN: I think we would like to
19 take a virtual tour, if you will, starting at a
20 2-megawatt block of collectors. And tell us what
21 voltages are there, whether it's AC or DC, and how does
22 it get to the next phase of accumulation. Just a tour, a
23 mental tour, of the whole thing.

24 MS. SOLOMON: Sure.

25 I don't know if we have a good exhibit to

1 depict that because the focus of our presentation was
2 mostly on the project substation and gen-tie line.

3 But in general, there's -- the project is kind
4 of laid out in 2-megawatt blocks, as I mentioned. Those
5 are typically in square configurations, so stacked all
6 around throughout the project site. And then at that
7 1500 voltage, then they're stepped up at each separate
8 location within the project site. And then there are
9 collection lines that run through the site and -- let me
10 go back to the other map to be sure.

11 MEMBER HAENICHEN: Are those underground?

12 MS. SOLOMON: Most would be overhead. There
13 would be potentially a few locations where they would be
14 underground.

15 So we would have some collection lines -- so
16 the one I mentioned crossing here. There would be lines
17 kind of running probably this way and then down here to
18 get to the project substation through down here. And
19 those would all typically be overhead.

20 So all those collection lines are bringing our
21 power all to one centralized location, which is where
22 kind of the Committee's -- or the purpose of this CEC
23 permit starts, which is the project substation right here
24 next to Delaney Substation. This is Delaney Substation.
25 And then the gen-tie line runs along here.

1 So it's all basically low voltage at each
2 separate spot within the whole project site, and then
3 those medium-voltage 34.5 kV collection lines are
4 bringing the power to a centralized location and stepping
5 up again to 500 kV.

6 MEMBER HAENICHEN: Okay. But am I correct in
7 making the statement that the solar collectors themselves
8 are not in one great big square? They're in a bunch of
9 different locations because of land ownership issues?

10 MS. SOLOMON: The collection lines are like --

11 MEMBER HAENICHEN: Not the lines. The
12 collectors themselves.

13 MS. SOLOMON: The solar panels?

14 MEMBER HAENICHEN: Yes.

15 MS. SOLOMON: Yeah. So the solar panels would
16 be on long arrays with solar trackers that would track
17 the sun throughout the day.

18 MEMBER HAENICHEN: Are they single-axis
19 trackers or double-axis?

20 MS. SOLOMON: Single-axis. So they would be
21 kind of configured like that in a stack in a square area,
22 and then there's an inverter pad at each of those
23 2-megawatt blocks that's stepping up the voltage to
24 medium voltage. At then each of those kind of
25 centralized locations within the 2-megawatt block, it's

1 brought via the collection lines and stepped up again.

2 MEMBER HAENICHEN: Does all the inversion in a
3 2-megawatt block take place at one spot there, or is that
4 done in lower voltages in chunks of it and then
5 amalgamated somehow?

6 MS. SOLOMON: The inversion would happen at
7 each block. I'm not sure --

8 MEMBER HAENICHEN: How many megawatts' worth?
9 2 megawatts' worth?

10 MS. SOLOMON: Yes.

11 MEMBER HAENICHEN: I realize we don't have
12 jurisdiction over the collection field, but I think the
13 Committee needs to understand how this is going to work.
14 So that's why I'm asking these questions.

15 MS. SOLOMON: Okay. Yeah. I could maybe loop
16 in our development engineer if you guys would like to
17 hear a more detailed description.

18 MR. DESMARAIS: I could do that.

19 MS. SOLOMON: Okay. My colleague Dennis
20 Desmarais will jump in.

21 CHMN. CHENAL: Mr. Desmarais, let's swear you
22 in. Would you prefer an oath or an affirmation?

23 MR. DESMARAIS: An oath sounds good.

24 (Dennis Desmarais was duly sworn by the
25 Chairman.)

1 CHMN. CHENAL: Thank you.

2 MR. DESMARAIS: I flew in this morning, and I
3 love looking out the window when I fly. And if you look
4 down on the solar farms, you see these rectangular black
5 shiny areas, which are the panels. But then every so
6 often, you see this little cutout where there's no panel,
7 and it looks like a little garden shed in there. Well,
8 that garden shed are those individual inverter stations.
9 So they're very clear from the air when you fly over.

10 So as my colleague Marina was saying, this
11 property will be broken up into these subpieces of about
12 2 or 3 megawatts, depending on where the technology is
13 at, and the solar panels will generate in about 1500
14 volts DC and then spread out 150 or 100 times, depending
15 on the size of the inverters. Throughout the project
16 will be these little garden shed size where it's both
17 converted from DC to AC and stepped up to 34.5000 volts.

18 And then those individual lines, as Marina was
19 explaining, 34.5000-volt lines, run throughout the
20 project, all come together at the substation indicated in
21 that yellow box there, and then they're stepped up by the
22 main transformer to 500,000 volts, which is then where
23 it's your jurisdiction.

24 MEMBER HAENICHEN: That's very helpful.

25 MR. MOYES: Mr. Chairman, we have one of the

1 exhibits -- the first exhibit, RE-1, has a couple of
2 photographs of a fully constructed solar generation
3 field. Perhaps it would be helpful for the Committee to
4 have that picture up on the screen.

5 If we can pull up RE-1, and then Mr. Desmarais
6 or Ms. Solomon can give us a description of the solar
7 site, how that all works.

8 MS. SOLOMON: Dennis, I'll let you take that
9 one.

10 MEMBER HAENICHEN: Okay. If I may --

11 CHMN. CHENAL: Member Haenichen.

12 MEMBER HAENICHEN: For clarification, on that
13 slide on the right, there's one big -- I would say it's
14 almost a square kind of toward the bottom of it.

15 How many megawatts is that?

16 MR. DESMARAIS: So each one of these --

17 MEMBER HAENICHEN: This square here. How many
18 megawatts is that?

19 MR. DESMARAIS: I'd have to count the number of
20 those little square buildings and multiply by about 2 to
21 see.

22 So it looks like that's about 2 megawatts,
23 that's about 2 megawatts, and that's about 2 megawatts.
24 So it looks like it's about 6 megawatts.

25 MEMBER HAENICHEN: Okay. Now, does each one of

1 those 2-megawatt blocks you just depicted have an
2 inverter?

3 MR. DESMARAIS: Yes. Each of those little
4 square or rectangular things there, that's the inverter
5 that converts it from DC to AC, and then there's a
6 transformer there that steps it up to 340,500 volts.

7 MEMBER HAENICHEN: Okay. But it's a 2-megawatt
8 inverter, basically?

9 MR. DESMARAIS: It depends. Again, we keep
10 getting more efficient in how we do this, so they keep
11 getting larger, but somewhere in that range.

12 MEMBER HAENICHEN: But you're not sure what it
13 will be because you haven't --

14 MR. DESMARAIS: Correct.

15 MEMBER HAENICHEN: Now, what are these pictures
16 of? Is this an existing field somewhere?

17 MR. DESMARAIS: Yes, sir.

18 MEMBER HAENICHEN: One of your projects?

19 MR. DESMARAIS: I think so. I don't know the
20 specific project, but I assume that since we're using it
21 in our slide, it must be one of ours.

22 It sounds like it's Garland, which is east of
23 Los Angeles --

24 MEMBER HAENICHEN: Okay.

25 MR. DESMARAIS: -- connected to Southern Cal

1 Edison.

2 MEMBER HAENICHEN: Okay.

3 And you don't have a slide, I'm assuming, for
4 this presentation here today of this particular project.
5 I know it isn't built yet, but something with an artistic
6 drawing of the whole -- is it a 300-megawatt project? Is
7 that what I heard you say earlier?

8 MR. DESMARAIS: Yes.

9 MS. SOLOMON: I might suggest we do the flyover
10 now so we can get a sense of the area.

11 MEMBER HAENICHEN: That's a good idea.

12 MS. SOLOMON: So this is an engineering drawing
13 showing our project footprint again.

14 So this is the flood control district again
15 that they mentioned before. But I think if we can go
16 back to the slides and play the flyover.

17 One moment.

18 Q. BY MR. MOYES: Ms. Solomon, can you describe
19 for us what this presentation is on the left screen.

20 A. So this is the Google Earth Flyover showing
21 some of the artistic renderings of our project substation
22 and gen-tie line.

23 It looks like this pole type is the monopole
24 scenario we're showing with the intermediate structure
25 turning vertical. And the gray area you see on the

1 screen, that's Delaney Substation. There actually are a
2 number of other tall towers on Delaney Substation, but
3 due to Google Earth not having a street view, those
4 aren't shown.

5 Q. If I might pause you there, Ms. Solomon.

6 On the right, we have what you described as an
7 engineering drawing, which we have not submitted as an
8 exhibit yet, but we can at the Chairman's discretion
9 afterwards. But I wanted to ask if Member Haenichen is
10 able to see on the right screen the color depictions of
11 the green shapes there.

12 MEMBER HAENICHEN: Yes, I can see that. Tell
13 me what that is.

14 Q. BY MR. MOYES: Would you describe that, please.

15 A. The green area shown is the area that we have
16 under our site control for the Papago project. And if we
17 move to the next page of the pdf document, you would
18 actually see the engineering-type drawings.

19 Keep going. Keep going. Keep going. Keep
20 going one more. One more. Maybe one more. Okay.

21 So on this drawing, it might be a little bit
22 hard to see, but those blue lines shown here, those are
23 the collection lines that I was mentioning. So this is
24 where the medium-voltage power is being routed and
25 arriving at the project substation. And this is West

1 Salome Highway. This is Indian School Road.

2 MEMBER HAENICHEN: Okay. Why is it so chopped
3 up like that? Is it because you couldn't get control of
4 a big block of land like you showed on the California
5 one, one great big rectangle?

6 MS. SOLOMON: Yeah. We've spent several years
7 securing site control for this project. It consists of
8 27 different land option agreements that we had to
9 individually negotiate with landowners that own land down
10 in that area.

11 So this is ultimately the land footprint that
12 we were able to secure. It actually is pretty
13 contiguous, I think you can see, but there were a few
14 parcels that we were not able to secure. But overall, it
15 will offer a pretty efficient project layout.

16 MEMBER HAENICHEN: Did you actually buy the
17 land or get a long-term lease?

18 MS. SOLOMON: We don't actually own or lease
19 the land yet, but we would do so before starting
20 construction. So we have the right to exclusively
21 develop the site under a land option agreement.

22 MEMBER HAENICHEN: Now, you may not know how to
23 answer this question, but there's going to be an
24 intervenor that has that similar project, right, in the
25 general area?

1 MS. SOLOMON: Correct.

2 MEMBER HAENICHEN: Is it right next to this or
3 2 miles away?

4 MS. SOLOMON: Their project is located to the
5 west of ours, roughly over here.

6 MEMBER HAENICHEN: And, Ms. Grabel, you're
7 going to represent that client?

8 MS. GRABEL: Chairman, Member Haenichen, yes, I
9 do represent that client. And as the Chairman asked me
10 earlier, I'm happy to walk through where our current
11 project is.

12 MEMBER HAENICHEN: If you know enough about it
13 from what you've studied, is it going to be all chopped
14 up like this, or is it going to be a great big square?

15 MS. GRABEL: No, it's not going to be -- I
16 mean, I frankly don't know. I think part of the issue
17 for my client is that because of the breadth of the site
18 control of the Recurrent team, they need to understand
19 more about what access they can get and where they can
20 site their project. That's one of the reasons for the
21 condition that we have, is figuring out what easement we
22 can get from the Recurrent team.

23 MEMBER HAENICHEN: But at the end of the day,
24 your project, when it gets built, it's going to wind up
25 at the same APS substation; is that correct?

1 MS. GRABEL: That's correct. It will intersect
2 into Delaney, correct.

3 MEMBER HAENICHEN: So is the problem going to
4 be the ingress of that right at the substation itself, or
5 is it going to be all through this whole area of two
6 massive fields of solar collectors?

7 MS. GRABEL: Thank you, Member Haenichen.

8 My understanding is that right now, the routes
9 do not conflict with one another. So it's just a matter
10 of figuring out the route that my client can take, which
11 requires an easement from the Recurrent team.

12 MEMBER HAENICHEN: Okay. Thank you.

13 MEMBER NOLAND: Mr. Chairman.

14 CHMN. CHENAL: Yes, Member Noland.

15 MEMBER NOLAND: I guess my question is, with
16 your land being to the west -- is that the right
17 direction, to the west? Or to the east?

18 MS. GRABEL: They're to the west of us.

19 MEMBER NOLAND: You're kind of landlocked from
20 getting into the Delaney Substation, are you not, and
21 that's why you're having to do this easement or want to
22 negotiate the easement?

23 MS. GRABEL: That's correct, Member Noland.

24 And if you will see on our Exhibit A, which I'll walk
25 through later, there is another route, but it's a much,

1 much, much longer route, which, of course, increases the
2 cost of the project and really doesn't make very
3 efficient use of the land.

4 MEMBER NOLAND: Thank you.

5 CHMN. CHENAL: Let me jump in.

6 Jason, you had indicated that Member Gentles
7 had his hand up in the chat room, and I don't see Member
8 Gentles on the screen.

9 MR. MOELLER: He's not showing up because his
10 video is apparently turned off, but his hand is raised.

11 CHMN. CHENAL: Member Gentles, can you hear us?

12 MEMBER GENTLES: Can you hear me?

13 CHMN. CHENAL: Now we can hear you. So let's,
14 for the record, note -- how long have you been listening
15 or participating in the hearing so far, Member Gentles?

16 MEMBER GENTLES: I joined at about 1:07.

17 CHMN. CHENAL: Okay. 1:07. So let the record
18 reflect that Member Gentles has been a part of the
19 proceeding as of 1:07.

20 Yes, and did you have a question or a comment?

21 MEMBER GENTLES: I did, but Member Haenichen's
22 question answered mine about five minutes ago, so I'm
23 good.

24 CHMN. CHENAL: Okay.

25 MEMBER GENTLES: It related to the composition

1 of the solar farm and basically the contiguousness of the
2 land, so we've already got that answered.

3 CHMN. CHENAL: All right. Thank you.

4 I'd like to go back and see your Exhibits 1
5 through 5 because I think your Exhibits 1 through 5 lay
6 out the answers to the questions. So if we can just kind
7 of go through that and then you can lay your foundation
8 for your Exhibits 1 through 5, I think that would be
9 helpful. 1 through 4.

10 MR. MOYES: Jason, if we're able to pull those
11 back up, starting with No. 1.

12 No. 1 was the color photograph with the text
13 Recurrent Energy North American Business Overview.

14 There we go.

15 Mr. Chairman, what you see on the screen is
16 what we have marked as Exhibit RE-1.

17 CHMN. CHENAL: If you could just -- if we could
18 just show those quickly to the Committee, the pages 1
19 through however many there are.

20 MR. MOYES: Maybe a little slower.

21 CHMN. CHENAL: Yeah. And I think Mr. Dawson
22 testified generally about this, but I think it would be
23 good to have these up when he was summarizing. It's just
24 easier to follow these exhibits.

25 But I think, Mr. Dawson, you testified to these

1 matters that are in this exhibit, correct?

2 MR. DAWSON: Yes, I did.

3 CHMN. CHENAL: Okay. Let's look at the next
4 page, then. I believe you testified to this, but maybe
5 not in as much detail.

6 If we could see the last page.

7 So in Arizona, you've got -- or the second to
8 last page. In Arizona, you have how much? Is that 30 M,
9 megawatts of solar --

10 MS. SOLOMON: That's correct.

11 CHMN. CHENAL: -- in Arizona? Okay.

12 And then the last page of that exhibit. And I
13 think that was something you also testified about. Is
14 that correct, Mr. Dawson?

15 MR. DAWSON: Yes, it is.

16 CHMN. CHENAL: Okay. Let's go to Exhibit 2,
17 RE-2.

18 MR. MOYES: Mr. Chairman, Exhibit RE-2 --

19 Q. BY MR. MOYES: Marina, do you have your binder
20 in front of you?

21 A. Yeah.

22 MEMBER GRINNELL: Mr. Chairman.

23 CHMN. CHENAL: Yes, Member Grinnell.

24 MEMBER GRINNELL: I apologize. It's really
25 hard to see their slides up on the Zoom here. I don't

1 know if Zach is having the same problem. Maybe it's just
2 my computer, which is possible. So, yeah, if they
3 could -- and also the presenter view, if he or she is
4 available to show themselves on the Zoom.

5 CHMN. CHENAL: When you say "presenter," what
6 do you mean, Mr. Grinnell?

7 MEMBER GRINNELL: On your screen there, you
8 have presenter view, you have all the various people that
9 are on your -- if you look your screen --

10 CHMN. CHENAL: Right.

11 MEMBER GRINNELL: -- and then you have Member
12 Noland and gallery view and presenter view. Does that
13 make any sense?

14 CHMN. CHENAL: So what's the question about
15 presenter view?

16 MEMBER GRINNELL: Well, if we could see he or
17 she that's presenting at the same time, that would make a
18 little bit better understanding. Because I'm shifting
19 through all the exhibits here on my desk, and I'm just
20 trying to keep track of what they're showing. It's hard
21 to see what they're putting up. Does that make sense?

22 MR. MOELLER: We'll try and accommodate that
23 here.

24 CHMN. CHENAL: The AV team will try to
25 accommodate that.

1 Right now we're looking at RE-2, which is a
2 project description.

3 And, Ms. Solomon, you've testified generally
4 about this, correct?

5 MS. SOLOMON: That's correct.

6 CHMN. CHENAL: But this goes into a lot more
7 detail it looks like.

8 But for laying a foundation, is this something
9 you prepared?

10 MS. SOLOMON: Yeah, I think I hit on most of
11 the key points within this description.

12 CHMN. CHENAL: Right. And then the next page
13 on Exhibit 2 is, again, just kind of a project vicinity
14 map. I don't know if we've seen that yet, but that's a
15 project vicinity map.

16 And then the third page of Exhibit RE-2
17 discusses the substation. And I don't know if you've
18 discussed the size of the substation, but according to
19 what I'm reading here, it's going to be approximately
20 1.71 acres. And it gets into I think some of the matters
21 that Member Haenichen was asking about.

22 MR. MOYES: If I may jump in, Mr. Chairman,
23 these first four exhibits, RE-1 through 4, for the
24 benefit of the rest of the Committee, were submitted at
25 the prefiling conference before some of the details were

1 later narrowed down and more focused into the actual
2 application.

3 So some of the technical details, I believe, in
4 these have been updated, but I'll let Mrs. Solomon
5 address which of those have changed, particularly the
6 footprint size of the substation that's described in this
7 last page that the Chairman is showing.

8 MS. SOLOMON: Yeah. The one update that we
9 made between our prefiling submittal and our full CEC
10 application was the footprint of the substation. I did
11 mention in the prefiling conference that we would be
12 updating that; and we have since, in our CEC application,
13 entered a project footprint substation of up to 13 acres.

14 CHMN. CHENAL: So the next page is page 4. Is
15 it kind of a photo of the proposed project?

16 MS. SOLOMON: Yeah. This is an aerial
17 depiction of the project substation, which is the yellow
18 box there. Each red pinpoint depicts a transmission
19 structure, and the blue line is our gen-tie line.

20 CHMN. CHENAL: Then the last page of
21 Exhibit RE-2 is the conceptual engineering drawing of the
22 project substation.

23 MS. SOLOMON: Yes.

24 CHMN. CHENAL: Member Haenichen, do you have
25 any questions?

1 MEMBER HAENICHEN: Yes, I do.

2 CHMN. CHENAL: Member Haenichen.

3 MEMBER HAENICHEN: First of all, I hope I'm not
4 being an obstructionist here. I'm trying to be helpful.
5 But at the end of the day, I don't mean just today, but
6 at the end of this hearing, we're going to try to have a
7 product, and that's going to be a CEC for the applicant
8 that allows them to build these interconnections to a
9 proposed but not-yet-existing solar field.

10 However -- and this probably is going to happen
11 over and over again in future projects because I suspect
12 that the world's going to transfer to renewable energy
13 and so there's going to be more solar projects, more wind
14 projects.

15 We have an intervenor here -- is that fair to
16 call you an intervenor? -- representing another potential
17 project that's in the works. And we have to come up with
18 some way to portray this so that at the end of the day,
19 the CEC that we allow, assuming we do allow a CEC, will
20 be acceptable to Ms. Grabel's client for their future
21 ingress to this substation.

22 So I think we're going to be facing that same
23 dilemma over and over again on future projects. So I
24 don't know what the answer is to that, but we have to
25 come up with some mechanism to make that happen.

1 MS. GRABEL: Mr. Chairman, Member Haenichen,
2 may I address that really quickly.

3 The condition that we agreed to with the
4 Recurrent team does address exactly the issue that you're
5 talking about. It allows us to negotiate an easement
6 with them within a certain time period.

7 MEMBER HAENICHEN: I did read that. But the
8 question is -- we have to have a map of where -- what
9 you're going to need to make your project a reality of
10 getting into that substation.

11 All you really said is, we're going to
12 negotiate in good faith and blah, blah, blah. Are you
13 okay with that, or do you think you'll have enough
14 assurance?

15 MS. GRABEL: I think we've received assurance
16 that they will, within a certain period of time, 30 days
17 after receiving approval of the CEC, reach an easement
18 agreement with us that allows us access without having to
19 incur the costs of going around the land that they have
20 site control of.

21 MEMBER HAENICHEN: Because earlier, maybe about
22 five minutes ago, I think I heard you make a statement
23 about, oh, we can do it this way, but it would be much,
24 much longer lines.

25 MS. GRABEL: Precisely. And I think -- if the

1 Recurrent team disagrees with me, I ask them to tell me
2 now. But the condition that we have negotiated allows us
3 to avoid the longer route and negotiate an easement that
4 allows us to access their property to do a much more
5 cost-effective route for our project.

6 MEMBER HAENICHEN: Okay. So you might actually
7 cross some of their property?

8 MS. GRABEL: Correct. That's the purpose of
9 the easement agreement. And, again, I ask Mr. Moyes to
10 correct me if I'm wrong in that understanding.

11 MR. MOYES: Let me just read for the record
12 exactly what the condition states and then elaborate as
13 necessary.

14 It states: Applicant -- that's us -- shall use
15 best efforts to reach, within 30 days of approval of the
16 CEC -- meaning when the final CEC is actually approved by
17 the full Corporation Commission.

18 MEMBER HAENICHEN: Yeah, I understand.

19 MR. MOYES: -- a commercially reasonable
20 agreement with Ellwood Land Holdings, LLC, in response to
21 Ellwood's request for easements necessary for Ellwood's
22 neighboring project to connect to the Delaney Substation.

23 I think key to remember in any negotiation that
24 has yet to occur, you don't know ultimately how that's
25 going to play out. And what we've agreed to with Ellwood

1 is to use our -- as it states here -- our best efforts to
2 reach a reasonable -- a commercially reasonable agreement
3 to that effect within that timeframe.

4 And so once that proceeding is done and between
5 now and whenever it goes before the full Commission as an
6 opening meeting, our respective clients will be in talks
7 to determine what that commercially reasonable value is
8 and hopefully reach that agreement.

9 Does that answer your question?

10 MEMBER HAENICHEN: It's still fuzzy when you
11 say "hopefully." What if you say, "Gee, we can't do it"?
12 I realize this is a very difficult point, but I want to
13 be sure both of you and the entities you represent are
14 going to be satisfied with our handling of it.

15 MR. MOYES: And that's why we worked out that
16 language that talks about using our best efforts and that
17 key "commercially reasonable agreement." Of course, if
18 one or the other party in any negotiation decided to be
19 unreasonable and offer to pay no more than one dollar for
20 an easement, you wouldn't ever reach an agreement.

21 MEMBER HAENICHEN: I understand that.

22 MR. MOYES: So without the ability to guarantee
23 anything because those negotiations have not taken place,
24 we tried to craft that language as carefully as we could
25 that would satisfy both parties for the purposes of

1 participation in this hearing, leave the door open for
2 those discussions so that our respective developers are
3 working together in good faith between now and then. And
4 we fully intend and expect them to do so.

5 I don't know that we could put a condition in
6 here that guarantees resolution of an agreement that has
7 not even begun full negotiations for it yet.

8 MEMBER HAENICHEN: One last question, and then
9 I'll quit on this. What's the rough timeline
10 differential between these two projects? Is yours going
11 to be years down the road or ...

12 MS. GRABEL: Member Haenichen, my understanding
13 is we are definitely behind this project. We are in the
14 process of still obtaining the rights-of-way we need in
15 order to develop it. But it is not years down the road.
16 We have potential offtakers now for our project, so we
17 want to get building as soon as possible. We'd like to
18 be able to be before this Committee within a year if we
19 can.

20 MEMBER HAENICHEN: That's very helpful. Thank
21 you.

22 CHMN. CHENAL: All right. Let's go to
23 Exhibit RE-3.

24 Q. BY MR. MOYES: Ms. Solomon, can you describe
25 what this Exhibit RE-3 is that we submitted at the

1 prefiling conference. And there are two pages to this.

2 And you can describe what this is talking about.

3 A. Sure. This is a project flyer that we prepared
4 to be able to kind of summarize our project for the
5 public.

6 It kind of hits on the project size; the
7 acreage of our project footprint; where it would
8 interconnect; the power customer, which is to be
9 determined, though we're in some active discussions; and
10 homes powered; the operation date; our targeted
11 commercial operation date. So online date for the
12 project is the end of 2023.

13 CHMN. CHENAL: So let me just make sure for the
14 record. It's a 300-megawatt project. It's going to
15 cover 2,800 acres. It's going to tie into the Delaney
16 Substation. Customers to be determined. Homes powered
17 by this project will be approximately 57,000. The
18 operation date -- the expected operation date will be
19 2023. It will provide up to 450 jobs and estimated taxes
20 of 29 million.

21 So that gets into the projected operation date
22 of 2023, and I think Ms. Grabel said her project would be
23 about a year behind.

24 And the next page, please.

25 MS. SOLOMON: The next page is just kind of

1 hitting on some highlights of Recurrent Energy, which I
2 believe Scott Dawson addressed in his testimony.

3 CHMN. CHENAL: Okay. Thank you.

4 And then we get to Exhibit RE-4.

5 Q. BY MR. MOYES: Ms. Solomon, I know you've
6 discussed this map, but for purposes of admission of this
7 specific Exhibit RE-4, would you please again describe
8 what this map depicts.

9 A. Yes. The footprint depicted in red on this map
10 is the area that our project has under site control. The
11 yellow block shown next to Delaney Substation is our
12 project substation. And the blue line going into Delaney
13 Substation is our gen-tie line.

14 CHMN. CHENAL: There's an existing transmission
15 line. Can you tell us what that is?

16 MS. SOLOMON: There are a number of existing
17 transmission lines in the area. There is the gen-tie
18 line, so that's a 500 kV line that runs along here from
19 the Harquahala gas plant, which is located about a mile
20 due west of our site. So that line runs here and then
21 along here and actually heads to the Palo Verde complex.
22 And then there's some -- a couple 500 kV transmission
23 lines that run along here also head to Palo Verde.

24 CHMN. CHENAL: And then, Ms. Grabel, is that
25 map big enough to depict approximately where your

1 client's project would be located?

2 MS. GRABEL: Actually, I'm just studying a map
3 of where my client's project is located, and I think the
4 answer is no. Is that correct?

5 MS. SOLOMON: I think their footprint would be
6 roughly right here.

7 MS. GRABEL: I think that's correct.

8 CHMN. CHENAL: Further west?

9 MS. GRABEL: Yes.

10 CHMN. CHENAL: Okay.

11 Let's -- it's 2:30. Let's take our afternoon
12 break, 15-minute break, and then we'll resume.

13 (A recess was taken from 2:31 p.m. to
14 3:01 p.m.)

15 CHMN. CHENAL: Good afternoon, everyone. That
16 was a little longer than normal, but that's okay. We had
17 some technical issues and just had to go over a few
18 procedural matters. So we're back on the record.

19 So, Mr. Moyes, back to you with your
20 continuation of your testimony and your exhibits.

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

22 Continuing on with the testimony of
23 Mrs. Solomon to further elaborate on the discussion we
24 were having, particularly the questions posed by
25 Member Haenichen regarding the Ellwood project.

1 In the break, we were able to upload some
2 additional documents as well as the exhibits that Ellwood
3 had previously docketed. And I'll turn the time over to
4 Ms. Grabel to explain what those are to shed some
5 additional light and context on how Ellwood project
6 interplays with ours.

7 CHMN. CHENAL: That's fine. And then whatever
8 it is the additional exhibits or documents are, will they
9 be applicant's exhibits, or will they be -- Ellwood has a
10 couple exhibits, but will they be ...

11 MS. GRABEL: I believe they will be Ellwood
12 exhibits. The map was created by Ellwood.

13 CHMN. CHENAL: Okay.

14 MS. GRABEL: So if we could pull up the map
15 that shows the Ellwood project relative to the current
16 project. Not that one. It has like a green depiction.

17 There we go. So the Ellwood project is called
18 the Maricopa Solar and Storage Project. As you see, that
19 is going to be located in the area marked in the green on
20 this map; whereas, the RE Papago project is to the right,
21 and it is depicted in blue.

22 CHMN. CHENAL: What exhibit number are we going
23 to give this?

24 MS. GRABEL: C, as in Charlie.

25 Just to give a little bit of background, the

1 Maricopa Solar and Storage Project is going to be about
2 11,500 acres, it's going to produce about 550 megawatts
3 of AC solar, which is enough to power about 1.5 million
4 homes. It will be using single-access tracking, same as
5 the Recurrent project, and it will use batteries to
6 dispatch power at night.

7 As I indicated before, we're about a year
8 behind the RE Papago project. Our commercial operation
9 date is 2024. Our hopeful gen-tie line is going to be
10 about 8 to 13 miles long, depending on the route that
11 we're able to secure, and that's going to be a 500 kV
12 transmission route.

13 So that's the location of our project relative
14 to the RE Papago. And I think that addresses Member
15 Haenichen's questions earlier, perhaps yours too,
16 Chairman.

17 Does anyone have any questions about this
18 project?

19 CHMN. CHENAL: Could you show with the laser
20 pointer, Ms. Grabel, the preferred route to tie in to
21 Delaney and the alternate route that could be avoided
22 with it.

23 MS. GRABEL: I think to do that, I'd like to
24 turn to the next map, which is Ellwood Exhibit B. You
25 have that in front of you, but it's painfully smaller. I

1 could hardly read it myself. So I'm going to try to pull
2 it up larger.

3 Okay. Is it possible to zoom that out any?
4 Maybe not. It's still very, very difficult to see here,
5 but you do have it in front of you in case you do want to
6 strain your eyes.

7 There we go. So if you could scroll down a
8 little bit and sort of focus on -- put the Delaney
9 Substation -- that's perfect.

10 So the Delaney Substation, as you see, is right
11 here. We have three alternatives that we're considering,
12 two of which go through the Recurrent options that they
13 have on land right now.

14 The first is this. And you remember our
15 project is located over here somewhere. It goes through
16 this portion of the RE Papago options.

17 The second goes through this and would access
18 Delaney through Thomas Road over there.

19 The third option that would not require us to
20 get an easement from RE Papago is a lot more expensive
21 because it's a lot longer of a line and, therefore, more
22 expensive to build.

23 If you could scroll back up so we can see the
24 top of the page.

25 So the area that was in RE Papago site control

1 is sort of along this area. And I ask Ms. Solomon to
2 correct me if I'm incorrect.

3 Scroll up more so we can see the top.

4 Our project is located over there somewhere.
5 We would have to build a line that goes this way and then
6 runs south into Delaney. So you see it's much longer
7 and, therefore, much more expensive. It also is less
8 ideal from a reliability perspective because it requires
9 crossing three existing 500 kV transmission lines. And
10 every time, of course, there's a crossing of a
11 transmission line, it increases the risk of some sort of
12 event from a transmission reliability perspective.

13 MS. SOLOMON: Mrs. Grabel, I would just provide
14 a correction that the line that you're showing with the
15 route to the north does cross our site control.

16 MS. GRABEL: Okay. Thank you.

17 MS. SOLOMON: So that would also require an
18 easement from us.

19 MS. GRABEL: Thank you for that clarification.
20 I appreciate it.

21 MS. SOLOMON: You're welcome.

22 MS. GRABEL: Did the Committee Members have any
23 questions for us about the project?

24 (No response.)

25 CHMN. CHENAL: Thank you.

1 MS. GRABEL: Thank you.

2 MR. MOYES: And, Mr. Chairman, I realize this
3 is a little unusual, Ms. Grabel having to act as the
4 attorney and somewhat of a witness for the intervenor
5 because they don't have a witness for them, but I wonder
6 if you would allow me to ask some follow-up questions of
7 Ms. Grabel. Since we don't have another witness to ask
8 those questions, I'm happy to try and navigate that
9 through my own witnesses, but I think there are some
10 questions that are raised by Mrs. Grabel's description of
11 their routes and their opportunities to enter into
12 Delaney that we may need to draw out.

13 CHMN. CHENAL: That is unusual.

14 MEMBER HAENICHEN: Mr. Chairman.

15 CHMN. CHENAL: Yes, Member Haenichen.

16 MEMBER HAENICHEN: I'd like to ask this
17 question to both of you: Do you think there's plenty of
18 buyers out there for the electricity for both of these
19 projects?

20 MR. MOYES: It is my understanding that yes,
21 there are. Obviously, some of our witnesses will be
22 talking about that and the marketing of our particular
23 project, and I'll let Ms. Grabel speak to hers.

24 MS. GRABEL: I concur. Yes, I think there's
25 plenty of demand for renewable energy in the region.

1 CHMN. CHENAL: Let's just proceed with your
2 witnesses, Mr. Moyes. And then if there are some
3 questions that we need some clarification on from
4 Ms. Grabel, we can deal with that.

5 Q. BY MR. MOYES: Are you ready to continue,
6 Ms. Solomon?

7 A. Yes.

8 Q. There was one particular --

9 MR. MOYES: Can we pull up Exhibit RE-2 again.
10 And the page 4, Attachment 4 to that map.

11 Q. BY MR. MOYES: Ms. Solomon, we described this
12 exhibit previously. You showed -- or explained to the
13 Committee what this depicts.

14 In the context of the discussion we've just had
15 with regards to Ellwood's potential interconnections to
16 Delaney Substation, can you please describe for us where
17 on this more zoomed-in map those potential
18 interconnections might come from in relation to our route
19 into Delaney?

20 A. Yes, sure.

21 So the route that -- they proposed three
22 different routes. This is Delaney Substation here, and
23 this was our project substation again with our gen-tie
24 line.

25 The easement that they are requesting runs

1 along here, which -- basically, our site control ends
2 here. Then south of here is Arizona State lands. So
3 this is where our property ends, and they've requested an
4 easement to come into Delaney along this route.

5 In terms of alternate routes they're showing,
6 they have shown a route that comes along here and enters
7 Delaney from the south. We have heard in the past that
8 that is a feasible way to interconnect into Delaney and
9 would be a viable route for them to pursue, so our
10 project would not be necessarily blocking them per se
11 from accessing Delaney, but would obviously not be their
12 preferred scenario.

13 The routes that they're requesting from the
14 north do appear to impact, actually, quite a bit our
15 project site control. I'm not sure with the line that
16 they showed whether that would be crossing in the
17 north-south configuration our site control or if they
18 would be crossing over some existing 500 kV lines and
19 going across some Arizona State lands and coming around.
20 But if it was routed on our side, that would actually be
21 pretty impactful to our project footprint.

22 Q. Is it fair to say, Ms. Solomon, that you don't
23 have enough details at this time of Ellwood's potential
24 routes to say whether or not any of those routes could be
25 constructed without requiring an easement from --

1 A. One of the routes they showed would not require
2 an easement from us.

3 Q. Which route is that?

4 A. That's the route that would come in from the
5 south, so coming along here and entering Delaney from the
6 south on Arizona State land.

7 Q. And just for argument's sake, if that route was
8 ultimately selected, from the understanding you have
9 right now, which, again, we know is limited at this
10 point, but based on that understanding, would that
11 southern route option be substantially longer than the
12 middle route, we'll call it, that you described that was
13 discussed in terms of asking for an easement from Papago?

14 A. No, I don't think I would agree with that
15 statement. I think it would be slightly longer but not
16 very much longer.

17 Q. Are we talking miles and miles longer or --

18 A. I would say, just from eyeballing it, maybe it
19 could add a quarter of a mile or so to their line, maybe
20 less. Probably less.

21 Q. Is there any other information that you feel
22 would be pertinent to the Committee at this time
23 regarding that interconnection or the Ellwood alternative
24 routes?

25 A. Maybe I could pass, with the Committee's

1 permission, to my colleague Dennis Desmarais, who might
2 be able to speak to some of the technical feasibility of
3 entering Delaney from the south.

4 MR. MOYES: And, Mr. Chairman, I believe --

5 CHMN. CHENAL: Sure. That would be fine.

6 Mr. Desmarais.

7 MR. DESMARAIS: I think an easy way to think of
8 Delaney is I look at my breaker box in my garage, and
9 it's kind of laid out the same way, top to bottom right.
10 And so there's a series of positions where you could drop
11 in a breaker and connect the circuits in your house.

12 And so, as was mentioned, two of these
13 positions are on the bottom, so there's room for two
14 lines to come in from the south that don't impact our
15 property a lot at all. Again, we only control to the
16 west and to the north.

17 There's obviously positions on the east side,
18 although that's farther for the Ellwood project. And
19 then there's also positions along here south of our
20 lines. So I think there's lots of options on how to get
21 into the substation. And, again, there's two that you
22 could come in from the south, both the southeast position
23 and the southwest position, that don't involve crossing
24 our property right here at all.

25 MR. MOYES: So, Mr. Desmarais, a question was

1 proposed by Committee Member Noland as to whether the
2 Ellwood project was, quote/unquote, landlocked by our
3 project. Based on your understanding of the
4 configuration of Delaney, would you agree with that
5 statement?

6 MR. DESMARAIS: It is not landlocked by our
7 project. We only control the property on the west and
8 the property on the north, but we have no control of the
9 property on the east or the south.

10 MR. MOYES: Okay. Thank you.

11 All right. Back to Ms. Solomon, if we may.

12 Q. BY MR. MOYES: Ms. Solomon, continuing on with
13 the description of your prefiled written testimony, can
14 you describe for the Committee the status of the
15 marketing efforts for this particular project and how
16 that plays into the need of the project.

17 A. Sure. So we are in some active conversations
18 with a power buyer or offtaker to purchase the power from
19 our project. Those are proceeding well, and we have
20 fairly high confidence that this might be successful.

21 And should I move on to the need at this point?

22 Q. Sure.

23 A. So maybe we should advance to the next slide.

24 So in terms of the need for the project, this
25 gen-tie line and project substation would be essential

1 for our project to be able to delivery power to the grid.
2 We need to be able to step up to the voltage that the
3 grid will accept at this location, which is 500 kV. So
4 without the CEC permit, we would not be able to do that.

5 In terms of other aspects of the project, as I
6 mentioned, is to ensure the project's viability. It's
7 also going to help meet Arizona's need for safe,
8 reliable, and economical electric power.

9 And, in addition, there's other benefits, which
10 include minimizing environmental impacts, including the
11 emission of green house gases and other particulate
12 matter.

13 Q. Ms. Solomon, if you could turn to
14 Exhibit RE-11.

15 MR. MOYES: And if we could have that pulled up
16 on the screen, RE-11, please.

17 Q. BY MR. MOYES: Would you please describe for
18 the record, Ms. Solomon, what this exhibit is.

19 A. Oh, this is the exhibit that describes that we,
20 Recurrent Energy, are willing -- and RE Papago are
21 willing to cover any overages and expenses that we may
22 incur from this hearing.

23 Q. And, Ms. Solomon, if you could turn to
24 Exhibit RE-13.

25 A. Got it.

1 Q. Ms. Solomon, is it your understanding that
2 Maricopa County is the only affected jurisdiction under
3 the line siting statutes that would require notice of
4 this project and of this hearing?

5 A. That's my understanding.

6 MR. MOYES: Mr. Chairman, I will avow for the
7 record that Exhibit 13 is a true and correct copy of the
8 Notice of Filing and Proof of Delivery of that notice to
9 the Board of Supervisors of Maricopa County.

10 CHMN. CHENAL: Thank you.

11 MR. MOYES: I apologize to backtrack here a
12 little bit. If we can turn to Exhibit RE-5 just so we
13 can lay a foundation for all of these, Mr. Chairman, and
14 with the help of our witnesses.

15 Q. BY MR. MOYES: Ms. Solomon, can you describe
16 for us what this picture and what the notice that's shown
17 on the screen that's RE-5 is.

18 A. Yes. This picture shows the text that was
19 printed on large size and posted along West Salome
20 Highway and also -- was it also along West Courthouse
21 Road, providing a notice of our hearing today. Just on
22 Salome Highway, I think.

23 Q. If we can move to Exhibit RE-6, please.

24 CHMN. CHENAL: Mr. Moyes, RE-5 has a number of
25 pages, including the sign location map. Are you going to

1 get into that at all before we move on to another
2 exhibit?

3 MR. MOYES: I apologize, Mr. Chairman.

4 If we can go back to RE-5. If we can show page
5 2 of RE-5.

6 Q. BY MR. MOYES: Ms. Solomon, can you describe
7 what this picture shows.

8 A. This is a picture of the posted sign on West
9 Salome Highway looking north.

10 Q. And this is an additional sign?

11 A. Yeah. I think there was a sign on the first
12 page and then also on the second page, two different
13 signs.

14 Q. And if we can turn to the next page of this
15 exhibit.

16 A. This is showing the locations of the signs,
17 which is a little hard to see, but those yellow dots here
18 are where those signs are posted.

19 Q. And that diagonal crosshatched line is Salome
20 Highway; is that correct?

21 A. Correct.

22 Q. And why did you choose these particular
23 locations for these signs?

24 A. Because they were the nearest locations in a
25 public right-of-way to our gen-tie line and project

1 substation.

2 Q. Thank you.

3 MR. MOYES: Are there any questions on that
4 exhibit, Mr. Chairman?

5 CHMN. CHENAL: No.

6 MR. MOYES: Moving along to RE-6. RE-6, as I
7 said, I will avow for the record that this is a true and
8 correct copy of the Chairman's Notice of Hearing with the
9 docketed number -- or the docket number.

10 And RE-7 is a cover letter, followed by a proof
11 of delivery receipt card from the post office showing
12 that this Notice of Hearing was, in fact, delivered to
13 the Board of Supervisors of Maricopa County pursuant to
14 the Chairman's Procedural Order.

15 And then if we can move to RE-8, there are
16 quite a few similar green delivery cards, all of which
17 are a depiction of proof of delivery of that same Notice
18 of Hearing with the Chairman's signature to each of the
19 Committee Members pursuant to the Procedural Order.

20 Moving to RE-9, please.

21 Q. BY MR. MOYES: Ms. Solomon, can you identify
22 what Exhibit RE-9 is.

23 A. Yes. This is the Notice of Hearing -- and
24 maybe it would be worth zooming in a little bit -- that
25 was published in the West Valley View, the newspaper,

1 providing a notice of our hearing.

2 Q. And then if we can move to RE-10, assuming
3 there's no questions. Would you please describe for us,
4 Ms. Solomon, what the three pages included in RE-10 are.

5 A. Is this what was -- the mailing that was sent
6 out?

7 Q. I believe so.

8 A. Okay. I believe this is the mailing that was
9 sent out to landowners in the area notifying them of the
10 hearing in a postcard format.

11 Q. And, Ms. Solomon, have you received any
12 response from any landowners in the area?

13 A. Not really related to the project. We've had
14 inquiries about land they have in the area, wondering if
15 we would be interested in developing it, but not really
16 regarding the project.

17 Q. So nobody contacted Recurrent to the best of
18 your knowledge regarding this postcard identified as
19 Exhibit RE-11?

20 A. Not that I can recall.

21 CHMN. CHENAL: Ms. Solomon, what was the area
22 again of the -- the area to which the postcards were
23 sent?

24 MS. SOLOMON: Maybe -- can a member of the
25 Transcon team help me with the radius?

1 Within 300 feet.

2 CHMN. CHENAL: Of the proposed transmission --
3 the gen-tie line and the substation?

4 MS. SOLOMON: Of the entire project footprint.

5 CHMN. CHENAL: Including the solar plant --

6 MS. SOLOMON: Correct.

7 CHMN. CHENAL: -- solar facilities? Okay.

8 Okay.

9 MEMBER HAMWAY: Mr. Chairman.

10 CHMN. CHENAL: Member Hamway.

11 MEMBER HAMWAY: How many individual homeowners
12 or landowners did that result in? How many postcards did
13 you send? 350 is just not a very large, wide notice, so
14 I was just curious how many people that hit.

15 MS. SOLOMON: 99. There's quite a few
16 different land parcels out there, so it could result in a
17 pretty large number of people.

18 MEMBER HAMWAY: Okay. Thank you.

19 MR. MOYES: Skipping ahead to Exhibit 12.

20 We previously had Ms. Solomon identify
21 Exhibit RE-11, Mr. Chairman, which was the letter
22 attesting to the company's willingness to pay additional
23 funds.

24 Exhibit RE-12 I will avow is merely proof of
25 delivery of that letter to the Commission's business

1 office.

2 CHMN. CHENAL: All right. Thank you.

3 MR. MOYES: Skipping ahead to Exhibit 14,
4 RE-14. Exhibits RE-14 and RE-15 I will avow are
5 affidavits of delivery from our court reporting service.
6 RE-15 is showing delivery to the Buckeye Public Library
7 of the prefiling conference transcript, and RE-15 is of
8 that same transcript to the Arlington Elementary School.

9 Moving to RE-16. Mr. Chairman, I will again
10 avow for the record that RE-16 is an affidavit from
11 myself stating that I personally delivered a copy of the
12 application as well as the Notice of Hearing to the
13 Buckeye Public Library as well as the Arlington
14 Elementary School.

15 CHMN. CHENAL: All right. Thank you.

16 MR. MOYES: RE-17 are the Ten Year Plans which
17 we have described and identified.

18 And RE-18 we will get into with our next --
19 with a subsequent witness.

20 So, with your permission, Mr. Chairman, we will
21 finish Mrs. Solomon's testimony, open her up to any
22 questions that the Committee may have for her, and then
23 move on to Mr. Desmarais.

24 CHMN. CHENAL: That's fine.

25 MR. MOYES: Does the Committee have any

1 additional questions for Ms. Solomon?

2 (No response.)

3 CHMN. CHENAL: Thank you, Ms. Solomon. And, of
4 course, you know that someone may ask a question of you
5 even if someone else is being asked questions.

6 MS. SOLOMON: Thank you very much.

7 MR. MOYES: Okay. And moving to Mr. Desmarais.

8

9 DENNIS DESMARAIS,

10 called as a witness herein, having been previously duly
11 sworn by the Chairman to speak the whole truth and
12 nothing but the truth, was examined and testified as
13 follows:

14

15 DIRECT EXAMINATION

16 BY MR. MOYES:

17 Q. Mr. Desmarais, would you please state for the
18 record and spell your last name.

19 A. Dennis Desmarais. D-e-s, as in Sam,
20 m-a-r-a-i-s again.

21 Q. Mr. Desmarais, by whom are you employed and
22 what is your title?

23 A. By Recurrent Energy, and I am director of
24 transmission.

25 Q. And you should have in front of you a copy of

1 your prefiled testimony as well marked as Exhibit RE-22.
2 Was that written testimony prepared by you or under your
3 direction?

4 A. Yes, it was.

5 MR. MOYES: Mr. Chairman, I'll avow that
6 Mr. Desmarais' written testimony, along with the other
7 witnesses' prefiled testimony, was also docketed and
8 delivered to you and the Committee Members on June 11th,
9 2021.

10 CHMN. CHENAL: All right. But just as I
11 indicated previously, that's nice, but we want to hear
12 the testimony today.

13 Q. BY MR. MOYES: Before we get into the substance
14 of your testimony, Mr. Desmarais, did you similarly
15 provide a description of your professional credentials?

16 A. I did.

17 Q. Would you briefly summarize the highlights of
18 those for the Committee.

19 A. Sure. I have a degree in mechanical
20 engineering from the University of Washington. I've
21 actually been in the energy industry my entire career, so
22 for 40 years now.

23 And for the last 16 years, I've been managing
24 generator interconnections. Six years for PacifiCore, I
25 managed their queue. And then now I just switched to the

1 other side of the table, and now I work for independent
2 power producers, making interconnection requests and
3 managing the entire process.

4 Q. Can you summarize some of the main points of
5 your prefiled testimony for the Committee, Mr. Desmarais.

6 A. Yes, I can.

7 Per the typical process across the United
8 States, in 2016, one of my colleagues, before I was hired
9 at Recurrent Energy, filed for an application for
10 generator interconnection with Arizona Public Service.

11 And then in 2017, we received our first study
12 results, which is called the System Impact Study, which
13 looks at all the different possible impacts on the
14 electrical grid from a power flow perspective, voltage
15 stability perspective, reactive power support.

16 And then about a year later, we received a
17 facility study, which details literally what facilities
18 will be required to interconnect the project.

19 And then in 2019, we completed the negotiation
20 of a generator interconnection agreement with Arizona
21 Public Service and Central Arizona Water --

22 MS. SOLOMON: -- Conservation District --

23 MR. DESMARAIS: Yes.

24 MS. SOLOMON: -- which I believe is CAWCD.

25 MR. DESMARAIS: That's correct. Yes.

1 Q. BY MR. MOYES: Mr. Desmarais, in your
2 discussions with APS regarding the interconnection
3 agreement, can you please elaborate a little more for the
4 Committee how those discussions went and, in terms of the
5 interconnection studies themselves, what those findings
6 resulted in.

7 A. Sure.

8 I mean, ultimately, the determination is that
9 the project can safely and reliably interconnect to the
10 grid. There was a question raised, and it was
11 highlighted in one of the studies, the question about
12 reactive power.

13 And the project, as submitted -- this project
14 was submitted in 2016, which is clearly a long time from
15 when it will actually get built. We take sort of the
16 best estimate we can about what's state-of-the-art
17 equipment at that time. And one of the study results is
18 that the project did not meet the reactive power
19 requirements. But the interconnection agreement assures
20 that by the time we build our project that all of those
21 requirements will be met.

22 So we will go then with state-of-the-art
23 inverters at the time we do it. We'll do a reactive
24 power study, and we will either add extra inverters or
25 add capacitor banks to make sure that we meet, as

1 contractually required, the reactive power requirements
2 of both Arizona Public Service and the Federal Energy
3 Regulatory Commission.

4 CHMN. CHENAL: All right. Time out. We're
5 going to have to get into that. That's exactly what the
6 Corporation Commission, the Staff, asked us to get into,
7 and you're going to take us to school a little,
8 Mr. Desmarais.

9 So what I will have marked as the Chairman's
10 Exhibit 1 is the Corporation Commission Staff's letter to
11 me which reviewed the project and goes into some rather
12 specific questions based on a System Impact Study that
13 APS performed, and that resulted in a series of
14 questions.

15 The first is basically, I guess, because of
16 this question: When the solar photovoltaic portion of
17 the project is generating, the project is 17.8 MVAR short
18 of the requirement.

19 MR. DESMARAIS: That's correct.

20 CHMN. CHENAL: Okay. And this shortage could
21 be mitigated by any of the following measures. And
22 there's four separate measures that are discussed.

23 And then there's a second question that is
24 asked, which says that when the BESS is discharging, the
25 project is 23.9 MVAR short of meeting the power factor

1 requirement. And this shortage could be mitigated by a
2 number of other suggestions that the Staff proposes.

3 And the Staff recommends that the Line Siting
4 Committee seek clarification from the applicant on those
5 mitigation measures it plans to pursue to alleviate the
6 power factor shortages at the high side of the generator
7 substation.

8 MR. MOYES: If we might pull up on the screen
9 for the benefit of those who can't see it, we do have
10 that letter that the Chairperson is referring to under
11 Exhibit RE-18. It is Attachment 3 to RE-18.

12 I believe the --

13 CHMN. CHENAL: Why don't we -- Mr. Desmarais,
14 let me just stay with you for a few minutes on this.

15 MR. DESMARAIS: Okay.

16 CHMN. CHENAL: And you know what I'm going to
17 ask you to do: Dumb it down so I can understand it.

18 And start with the letter itself. And if you
19 need a copy of it, you can have it. And explain what
20 this means.

21 And this is the first time that I'm aware that
22 the Corporation Commission Staff has specifically asked
23 the Line Siting Committee to get into this area and ask
24 what mitigation measures would be appropriate for the
25 questions that they have raised. I think that's the

1 first time that's been done.

2 So in order to create that record, I think we
3 need to understand from you or another witness what their
4 questions are, what they mean, and what the proposed
5 resolution or mitigation measures would be. And I know
6 you just gave us a lot of information, none of which I
7 understand. And I'm not ashamed to admit that.

8 MR. DESMARAIS: You shouldn't be, not based on
9 this topic.

10 CHMN. CHENAL: This is what I've been asked to
11 do, and I just need to have you explain the letter,
12 basically, and --

13 MR. DESMARAIS: Sure.

14 CHMN. CHENAL: -- what these mean.

15 MR. DESMARAIS: Well, let's start with the
16 mitigation measures first because that's the easiest.

17 So, again, as we get ready to build the
18 project, we're going to hire an engineering firm to do
19 detailed engineering for us on the project, and one of
20 the requirements is we have to meet everything that's
21 laid out in the interconnection agreement.

22 So at that time, we'll select an inverter. And
23 in this whole world of solar energy, it's really simple
24 except for the inverters are the most interesting piece.
25 They're a computer-controlled piece of equipment. They

1 convert it, as we talked about earlier, from DC power to
2 AC power.

3 So we'll select the particular inverters.
4 They're always different than the ones we applied with.
5 I've never done an interconnection on either side of the
6 table where the equipment you applied with six years ago
7 was what got built because the technology changes that
8 fast.

9 So we'll go -- we'll do an engineering study.
10 We'll select the inverters. We'll know the exact
11 electrical characteristics of the transformer that's
12 raising that voltage from 34,500 volts to 500,000 volts.
13 We'll know the panels. We'll know all the details. And
14 then we'll do a study.

15 And as is laid out -- they actually say what
16 the options are there, right? We can either add more
17 inverters and the inverters can provide that extra
18 reactive power, or we can add capacitor banks, which are
19 just storage devices that can inject voltage when needed
20 to prop back up the grid.

21 CHMN. CHENAL: You said "reactive power."

22 MR. DESMARAIS: Yeah.

23 CHMN. CHENAL: These are all terms that are
24 very familiar to you but not necessarily to me, so ...

25 MR. DESMARAIS: I don't mean to be glib, but if

1 you Google it and you go look, it's pretty funny. And
2 one of the common explanations is reactive power is the
3 foam on the beer. It takes up space in the glass, but
4 it's necessary.

5 So there needs to be -- our project has to be
6 able to react to the conditions on the grid. So, for
7 instance, Arizona Public Service could tell us, we want
8 you to control the project --

9 (Cellphone rings.)

10 CHMN. CHENAL: That was a phone reacting to
11 your definition of reactive power.

12 MR. DESMARAIS: Again, I don't mean to be glib,
13 but this is the hardest thing for most people to
14 understand, including myself, about reactive power.

15 CHMN. CHENAL: The beer analogy is perfect. I
16 get it precisely.

17 MR. DESMARAIS: Yeah. Good.

18 Another one that actually works very well, it's
19 like a wheelbarrow. If you have a wheelbarrow full of
20 dirt, you don't just walk up and shove it. You have to
21 lift it up first. There needs to be an angle between the
22 voltage and the current so that the power will flow.

23 So, anyway, APS could give us a voltage control
24 setpoint. They'd say, we want you to control to a
25 certain voltage at the point of interconnection. And if

1 something was going on in the grid, there was a big
2 increase in load, the voltage would start to decrease,
3 and then we would be asked to inject reactive power or
4 VARs, Volts-Amps Reactive, into the grid to prop it back
5 up. And the Federal Government, as documented in our
6 interconnection agreement, tells us that we have to be
7 able to basically inject 5 percent additional to prop it
8 up or to absorb 5 percent to lower the voltage if it was
9 too high.

10 So that's the idea. It's not uncommon that we
11 get a study result back that says you didn't pass, and
12 it's always the exact same. You just need to address it
13 before you're allowed to come online. So through some
14 combination of either extra inverters, both for our
15 photovoltaic plant and the PV plant; or for the battery
16 storage; or for the addition of these cap banks, which is
17 like you inject this little jolt of voltage to prop up
18 the grid or absorb voltage to lower it. These infamous
19 VARs.

20 CHMN. CHENAL: That's very helpful. So let me
21 go through a few more because you're very good at
22 explaining it.

23 MR. DESMARAIS: Thank you.

24 CHMN. CHENAL: And I do appreciate it.

25 And I'm reading from page 2 of the letter, the

1 second to last full paragraph. And it's up on the
2 screen, but it's hard to read because the print is so
3 small.

4 It says: However, some deficiencies were
5 identified regarding the power factor performance. A
6 minimum of plus or minus 99.1 Megavolt-Ampere Reactive
7 capability (MVAR) at the high side of the generator
8 substation is required to meet the plus or minus 0.95
9 power factor requirement.

10 Can you explain what that means?

11 MR. DESMARAIS: Sure. So like I was saying
12 before, that we have to be able to go 5 percent higher or
13 5 percent lower. That would be 1.05, or it's also said
14 plus or minus .95. So that's, again, the range that
15 every generator has to be able to deliver in at the point
16 that we connect to the grid.

17 And then the 99.1, they're just quantifying how
18 much capability they think we're deficient or we have to
19 have to do that.

20 CHMN. CHENAL: Thank you.

21 And then it says: When the solar photovoltaic
22 portion of the project is generating, the project is 17.8
23 MVAR short.

24 So that's basically saying it needs additional
25 reactive power in order to supplement when it's

1 necessary?

2 MR. DESMARAIS: Correct. So, again, the PV
3 plant can operate separate from the storage, so they both
4 have their own result.

5 CHMN. CHENAL: And so this storage could be
6 mitigated by the following measures.

7 It says: Install a minimum of 17.8 MVAR of
8 shunt capacitors in addition to the planned 4 MVAR.

9 Can you translate that?

10 MR. DESMARAIS: So when we submitted our
11 application, we said we -- we just make sort of a shot at
12 what we think will work. And so we had said 4. So
13 they're saying, actually, we would have to install 17.8.
14 And that's probably the most likely way that we would
15 resolve this, is just by installing more capacitors.

16 CHMN. CHENAL: The second is: Install
17 additional solar PV inverters.

18 And that, again, is to convert the power from
19 AC to DC?

20 MR. DESMARAIS: Yeah. So you just have more
21 inverters than you need to just provide when you're at 1.
22 1 is when there's no foam on the beer, the glass is full
23 of beer. That's the easiest and when we get paid the
24 most. But we could install more inverters. And then
25 instead of those inverters creating beer, they're

1 creating foam.

2 CHMN. CHENAL: I love it. That's just the
3 perfect analogy for me.

4 MR. DESMARAIS: I tell you, if you go Google
5 it, that's what you'll find all over the place. There's
6 pictures and diagrams and everything using foam on the
7 beer.

8 CHMN. CHENAL: The third is: Provide reactive
9 power from the Battery Energy Storage System (BESS) when
10 the solar PV is generating.

11 I'm understanding this better now, but if you
12 could describe that.

13 MR. DESMARAIS: Sure.

14 So the most likely way that this all operates
15 is in the middle of the day when the sun is shining, the
16 PV is generating and putting power into the grid, but the
17 battery storage is just sitting there. So you could use
18 some of the capacity in the inverters for the battery
19 storage that are just sitting there to inject that
20 reactive power.

21 CHMN. CHENAL: And the last one is: Reduce the
22 planned net active power from 300 megawatts to 287
23 megawatts.

24 MR. DESMARAIS: So if we just stuck with the
25 amount of capacitor banks we were proposing to install,

1 we would have to lower the output of the project to 287
2 to meet the reactive power requirements. But Marina is
3 going to want me to deliver 300 because that's what she's
4 going to get paid for, so we'll probably not take that
5 option.

6 CHMN. CHENAL: So at least for this portion of
7 the questioning from the Staff, you indicated that the
8 probable solution to the first issue they raise is to
9 add -- install a minimum of 17.8 MVAR of shunt capacitors
10 in addition to the planned 4?

11 MR. DESMARAIS: Correct.

12 CHMN. CHENAL: All right.

13 Now, let's go through to the second question
14 and the series of possible solutions, which I think will
15 be a lot easier to understand.

16 So it says: When the BESS, which is the
17 battery energy storage system, is discharging, the
18 project is 23.9 MVAR short of meeting the power factor
19 requirement. So more foam?

20 MR. DESMARAIS: Correct.

21 CHMN. CHENAL: And then it also gives a series
22 of mitigation solutions.

23 Again, install additional shunt capacitors.
24 Now, these shunt capacitors are different than the other
25 ones? Is that -- what's the connection between the two?

1 MR. DESMARAIS: I think they're just treating
2 this almost like two separate power plants. The reality
3 is we probably have one common set of shunt reactors that
4 serve both, but that will be resolved in the final
5 detailed engineering.

6 CHMN. CHENAL: So if you were going to adopt
7 the two solutions for additional shunt capacitors, would
8 you be adding the two numbers together, the 17.8 plus the
9 4, plus the 23.9 plus the 4?

10 MR. DESMARAIS: Yes. But just remember that's
11 based on the equipment that we submitted in 2016. So it
12 will be with whatever is the equipment that we are
13 choosing when we're -- right before we build the project.
14 So the map won't be exactly the same, but the outcome is
15 the same. We'll still be able to meet that plus or minus
16 .95 at the point that we connect to the grid under all
17 situations.

18 CHMN. CHENAL: And are these shunt
19 capacitors -- I'm trying to understand. It sounds like
20 the Staff has asked this: It's making it sound like
21 there's two different facilities, one for battery and the
22 other at another location. But are they all the same or
23 are they actually different?

24 MR. DESMARAIS: They are the same. They'll all
25 be in that same fence and that same switchyard that we've

1 shown up there on the drawings. The same substation.

2 CHMN. CHENAL: Right.

3 MR. DESMARAIS: It's just the way they model
4 it. They model it like two separate projects because
5 they obviously modeled the PV generating in the middle of
6 the afternoon, and they probably modeled the batteries at
7 a different time of the day when it's more likely that
8 they're injecting into the grid. Like in the evening as
9 the sun's going down and then everybody's home and their
10 air condition's jacked up, then the batteries are
11 injecting it into the grid.

12 CHMN. CHENAL: Are these shunt capacitors -- so
13 there's battery storage and then there's the solar PV.
14 Is it -- if you use the numbers here, if these are the
15 accurate numbers -- I know it can change when you develop
16 it. Are we talking about 17 plus 24?

17 MR. DESMARAIS: Yes, sir.

18 CHMN. CHENAL: 17 PV, 24 for the battery --

19 MR. DESMARAIS: Yeah.

20 CHMN. CHENAL: -- for BESS?

21 MR. DESMARAIS: Correct.

22 CHMN. CHENAL: Okay. And they have additional
23 solutions for the battery storage portion of it,
24 additional shunt capacitors.

25 The second is additional BESS converters.

1 That's the same, that converting the DC to AC?

2 MR. DESMARAIS: Exactly. The solutions are the
3 same for both the PV and for the BESS. It's either you
4 add more inverters or you add capacitor banks or you
5 borrow from the other side of the project. The BESS
6 borrows from the PV or the PV borrows from the BESS,
7 inverter capacity.

8 CHMN. CHENAL: And in both situations, you
9 believe the most likely solution is to add additional
10 shunt capacitors?

11 MR. DESMARAIS: That's what's been recently.
12 It all depends on what economics are at the time and
13 what's available and things like that, so ...

14 MEMBER HAENICHEN: Mr. Chairman.

15 CHMN. CHENAL: Yes, Member Haenichen.

16 MEMBER HAENICHEN: That prompts me to ask this
17 question: What are the economics for the shunt
18 capacitors, the amount you're talking about that you have
19 to put in? How much is it going to cost?

20 MR. DESMARAIS: I would be speculating quite a
21 bit, but I would say somewhere around \$500,000. I mean,
22 that's sort of the order of magnitude.

23 MEMBER HAENICHEN: Thank you.

24 CHMN. CHENAL: Just another question. This is
25 very helpful.

1 So the question to us is Staff recommends the
2 Line Siting Committee seek clarification from the
3 applicant on the mitigation measures it plans to pursue
4 to alleviate the power factor shortages.

5 I think I understand up to that point, and then
6 it's the next clause that loses me: At the high side of
7 the generator substation.

8 MR. DESMARAIS: Yeah. I was using a little bit
9 of terminology, I said a couple times, at the point of
10 interconnection. So, again, it's not just so we meet the
11 requirement somewhere back in, because we lose that as we
12 go through our lines and get closer to where we connect
13 to APS.

14 So the point is not that we meet it somewhere
15 else at the 34.5 voltage low side of our transformer. We
16 have to meet it at the point that we connect to Delaney,
17 which, in their terms, was -- so I forgot already what
18 term they use, but, anyway, we have to meet it where we
19 connect to the grid.

20 CHMN. CHENAL: Yeah. All right. That's very
21 helpful.

22 MEMBER HAMWAY: Mr. Chairman.

23 CHMN. CHENAL: Yes. Member Hamway.

24 MEMBER HAMWAY: So when you saw the letter from
25 the Corporation Commission, was any of that a surprise?

1 MR. DESMARAIS: No.

2 MEMBER HAMWAY: Okay. And so this Corp Comm
3 was working off a 2016 study by APS that determined that?

4 MR. DESMARAIS: Yeah.

5 MS. HAMWAY: And so now we're five years later?

6 MR. DESMARAIS: Yeah.

7 MEMBER HAMWAY: So why would they spend so much
8 time working with old data from 2016 only to tell you
9 something you already know?

10 MR. DESMARAIS: The process is just set up that
11 way, right, that these things often take a long time to
12 work their way through. And that's why we do an initial
13 set of studies.

14 And the thing that doesn't change is how many
15 megawatts. It's still a 300-megawatt project. And so
16 we're capped -- if Marina said, I want 310, I'd say, No,
17 we've got to start over. That's the thing that's really
18 the most important. And we can't do more than 300
19 megawatts without starting -- coming back in the queue
20 again.

21 So these are more the engineering details. And
22 all of these rules are basically based off of Federal
23 Energy Regulatory Commission has a general process on how
24 you do this, and that's what these are based off of.

25 So everybody recognizes, like, I've probably

1 been involved in 100 of these, again, from both sides of
2 the table. It's never the same equipment by the time you
3 build it.

4 MEMBER HAMWAY: Right.

5 MR. DESMARAIS: The stuff really changes.
6 Which is good for everybody, because the prices just keep
7 coming down. So as we get closer to the end, we'll do
8 this final study, it will again be approved by APS and
9 people like that to show that we're meeting all of these
10 requirements in this interconnection agreement that's
11 executed.

12 MEMBER HAMWAY: I guess I'm just surprised they
13 spent so much effort on something you already knew the
14 answers.

15 MR. DESMARAIS: Yeah. Again, the megawatt part
16 is the most important, and so they make sure that that's
17 all covered, and then this stuff just changes. But the
18 process recognizes that. I mean, it's the same across
19 the United States.

20 MEMBER HAMWAY: Okay.

21 CHMN. CHENAL: Member Haenichen.

22 MEMBER HAENICHEN: Some of these things are
23 going to be approximations, so I presume that after the
24 thing gets built, if APS is just not satisfied that
25 you're meeting the requirements, you can add more devices

1 to the system to mitigate that; am I right?

2 MR. DESMARAIS: For sure. So we have a
3 contract and interconnection with Arizona Public Service.
4 And if we are not meeting the requirements of that, they
5 can declare us in default of our interconnection
6 agreement, and we typically have X days to fix it. So --

7 MEMBER HAENICHEN: Yeah. They could actually
8 shut you down, just say you can't --

9 MR. DESMARAIS: That's correct.

10 MEMBER HAENICHEN: -- interconnect there.

11 MR. DESMARAIS: That's correct.

12 MEMBER HAENICHEN: That's the protection we
13 have.

14 MR. DESMARAIS: For sure.

15 CHMN. CHENAL: How long is that
16 interconnection -- what's the term of the interconnection
17 agreement?

18 MR. DESMARAIS: I'd have to look for sure. I
19 think it's 40 years.

20 CHMN. CHENAL: Has it already been entered into
21 with APS?

22 MR. DESMARAIS: Yeah, but it -- it has been
23 entered into, yes, in 2019.

24 CHMN. CHENAL: And then it anticipates the
25 project will be developed in accordance with the

1 requirements of the interconnection agreement?

2 MR. DESMARAIS: Yeah. It has to be, yeah.

3 CHMN. CHENAL: And are the matters that were
4 raised by the Corporation Commission Staff, are they
5 addressed in any way in the interconnection agreement?

6 MR. DESMARAIS: Yeah. There's two separate --
7 there's a paragraph specifically that says we have to
8 meet those requirements, and then there's an appendix
9 also to the interconnection agreement. It's actually
10 a -- it's FERC Order 827. So FERC Order 827 is attached
11 as -- I made a note somewhere.

12 Anyway, it's specifically called two places in
13 the interconnection agreement. Oh, sorry. Appendix G is
14 FERC Order 827. And then also there's section 9.6 of the
15 interconnection agreement, which is called Reactive
16 Power. It won't mention foam on the beer anywhere in
17 there, though.

18 CHMN. CHENAL: That's all right. You've
19 changed my life with that analogy.

20 MR. HAENICHEN: You're a better man.

21 CHMN. CHENAL: And I'm going to study reactive
22 power tonight is what I'm going to do.

23 MR. DESMARAIS: Good. Well, if you're looking
24 for a job, then let me know.

25 CHMN. CHENAL: Okay. I'm going to ask Member

1 Haenichen if he has any additional questions regarding
2 the matters that were -- that we were asked to question
3 and get into from the Corporation Commission Staff.

4 MEMBER HAENICHEN: No, because I think the last
5 part of this discussion where we talked about the details
6 of the interconnection agreement and where the
7 responsibility is fully on this applicant to meet. And
8 if they don't, they're just going to get shut down. So
9 that could be a huge expense to them.

10 MR. DESMARAIS: For sure.

11 MEMBER HAENICHEN: So -- and I assume they have
12 very good technical people that understand how to
13 mitigate these things. I'm satisfied.

14 CHMN. CHENAL: All right. Thank you.

15 MR. DESMARAIS: You're welcome.

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

17 Q. BY MR. MOYES: And I know, Mr. Desmarais,
18 you've gone into great detail, but I wanted to clarify
19 here in the closing of your testimony for the record your
20 responses to the following questions:

21 In your professional opinion as director of
22 transmission and interconnection, will the proposed
23 interconnection arrangements for this RE Papago Gen-tie
24 Project, when completed and implemented, comply with all
25 applicable regulatory and industry-governing standards

1 for safety, reliability, and good utility practice?

2 A. Yes, they will.

3 Q. Do you anticipate that this interconnection
4 will have any adverse effect on the Arizona electric
5 transmission system?

6 A. No, I do not.

7 Q. And, again, in your professional opinion, do
8 you believe that this interconnection will -- and the
9 RE Papago Solar facility itself will help meet the
10 state's and the region's need for an economical, reliable
11 supply of clean renewable power?

12 A. Yes, it will.

13 Q. Thank you, Mr. Desmarais.

14 Is there anything else, any other details that
15 you'd wish to add to your testimony, that would be
16 helpful or beneficial to the Committee?

17 A. No, there aren't.

18 MEMBER GRINNELL: Mr. Chairman.

19 CHMN. CHENAL: Yes, Mr. Grinnell.

20 MEMBER GRINNELL: Back to the recommendations
21 by Staff, I'm looking at No. (d), the letter (d), Reduce
22 the planned net active power from 300 to 287 megawatts.

23 Is this going to change any of the
24 applicant's -- on our decision one way or the other, is
25 this going to affect us? I mean, they're saying reduce

1 it, but they're -- are we going to be affected by this
2 recommendation, is the real question, Mr. Chairman?

3 CHMN. CHENAL: I'm going to let Mr. Desmarais
4 answer that, Member Grinnell, but I think no.

5 No. 1, the solar plant is not within our
6 jurisdiction. So whether it's 300 or 287 really is not
7 within our jurisdiction.

8 But, No. 2, I think Mr. Desmarais said that
9 Ms. Solomon is going to insist that this be a
10 300-megawatt project and that he's going to have to
11 figure out other mitigation measures other than
12 subsection (d), which would be to reduce the megawatts,
13 but I'll let Mr. Desmarais respond.

14 MR. DESMARAIS: Yeah, that's correct. While
15 that is a possible solution, that's not very likely that
16 that's one we'll pick. But, ultimately, it makes no
17 difference on the scope of what we're reviewing here.
18 It's still the exact same transmission line. There's
19 just a little less power flowing through it.

20 CHMN. CHENAL: Does that answer your question,
21 Mr. -- Member Grinnell?

22 MEMBER GRINNELL: Yes, sir.

23 MR. DESMARAIS: And I guess I just would add
24 one thing: So, you know, the numbers that we went
25 through about how much was added and the options, option

1 that was not a surprise because that was all in our
2 System Impact Study. So all of those numbers were just a
3 cut-and-paste of the impact study we received in 2017
4 from Arizona Public Service.

5 CHMN. CHENAL: Thank you.

6 Member Haenichen.

7 MEMBER HAENICHEN: This discussion points out
8 to me, at least, the unwiseness of the fact that this
9 Committee doesn't have something to say about power
10 generation like solar because, the fact is, solar makes
11 DC electricity, and that causes these reactive power
12 problems. And if we had something to say about it, we
13 could inject objections based on that.

14 However, mitigating that, in my mind, at least,
15 is the fact that a company like this applicant is going
16 to spend hundreds of millions of dollars building this
17 solar field. Either they're very stupid with the use of
18 their money, which I don't think they are, or they're
19 going to do -- put the systems in place to mitigate this
20 right from day one. And it won't be perfect, but, again,
21 that was basically my earlier question: Will they tweak
22 this to make this work?

23 MR. DESMARAIS: I'm not sure it's appropriate,
24 but could I respectfully disagree with you about --

25 MEMBER HAENICHEN: Sure.

1 MR. DESMARAIS: So VAR problems exist. I
2 started my career building nuclear power plants, as we
3 said, 40 years ago. VAR problems existed back then,
4 right?

5 When you have a -- when a big engine -- if you
6 had a foundry here or a mine and a rock crusher starts up
7 and a big motor starts up, that sucks VARs out of the
8 system.

9 MEMBER HAENICHEN: Yeah.

10 MR. DESMARAIS: So way prior to any invention
11 or wind or solar or things like that connecting to the
12 grid, there's always been an issue with VARs on an
13 electric grid. Then there's just differences on how the
14 different technologies make up for those VARs. But
15 there's already been VAR consumers and VAR creators in
16 the grid long before renewables were connected to the
17 grid.

18 MEMBER HAENICHEN: Yeah. But that VARs problem
19 you're talking about is on the user end with the large
20 motor starting up, right?

21 MR. DESMARAIS: Well, the electric utility
22 still has to make sure that the grid has the appropriate
23 amount. And you can see in their tariffs, through things
24 like demand charges and VAR charges, that they already --
25 I suspect if you looked at, like, the big pumping

1 stations on the --

2 MEMBER HAENICHEN: Oh, yeah.

3 MR. DESMARAIS: -- on the canals here, those
4 kind of things consume a lot of VARs. So the utility has
5 a tariff or that will charge those people that are
6 consuming VARs for consuming those VARs.

7 MEMBER HAENICHEN: But the very experience
8 you're talking about of the utilities dealing with this
9 over decades is still going to be in play, and that's a
10 good thing.

11 MR. DESMARAIS: For sure. For the grid to be
12 reliable, we have to make sure that we're watching VARs
13 and keeping the grid in balance.

14 CHMN. CHENAL: VARs, again, is what? Is it
15 VARs or BARs?

16 MR. DESMARAIS: V-A-R-s. Volt-Amps Reactive, S
17 just for plural.

18 MEMBER HAENICHEN: Or reactive power,
19 basically.

20 MR. DESMARAIS: Reactive power, exactly.

21 CHMN. CHENAL: Any further questions, Member
22 Haenichen?

23 MEMBER HAENICHEN: No.

24 CHMN. CHENAL: I wanted to get into just a
25 little discussion about the battery storage aspects of

1 the project. I don't think we've heard that much about
2 it. Or if we have, I didn't appreciate it at the time,
3 but I'd like you to maybe just explain a little context
4 or background on the storage aspects of the project.

5 MR. DESMARAIS: Sure.

6 And there's big containers full of batteries
7 will be stacked out on any of these projects. There's
8 all these different economic reasons about how or why
9 they'll be used, when they'll be used. And they really
10 all look the same.

11 Honestly, behind the inverters could be
12 batteries, could be PV, it could be wind farms. But to
13 the grid, they all look the same. It's all just
14 ultimately AC power that meets the requirement of the
15 grid.

16 But there will be, again, a series of battery
17 containers with their own inverters that will be used to
18 both absorb that initially all are recharged by the PV
19 because that's what's required to meet the investment tax
20 credit. Then once the investment tax credit is used,
21 then they're charged from the grid or from the PV as the
22 owner of the project chooses to do.

23 CHMN. CHENAL: Then how many megawatts of
24 storage will there be for this 300-megawatt project?

25 MR. DESMARAIS: Well, right now, what's in our

1 interconnection agreement is it could be up to 300. But
2 ultimately, it depends on what happens with the project
3 commercially.

4 MS. SOLOMON: Yeah. That's 300 megawatts with
5 a four-hour duration, so 1200 megawatt-hours.

6 CHMN. CHENAL: So four hours of capacity.

7 Thank you.

8 Mr. Moyes.

9 MR. MOYES: Are there any additional questions
10 for Mr. Desmarais?

11 CHMN. CHENAL: I don't think so. Not at this
12 time.

13 MR. MOYES: Thank you, Mr. Desmarais.

14 MR. DESMARAIS: You're welcome. Thank you for
15 your good questions.

16 MR. MOYES: We will move on, if the Chairman
17 will allow at this time, to Mr. Michael Warner.

18 CHMN. CHENAL: Let's take just a five-minute
19 break. This is a good time to do that. We've covered a
20 lot of material. Let's take a short break and resume and
21 go till 5.

22 (A recess was taken from 4:09 p.m. to
23 4:28 p.m.)

24 CHMN. CHENAL: All right. Let's go back on the
25 record and resume the hearing.

1 I think when we left off, Mr. Moyes, you were
2 considering calling your next witness.

3 MR. MOYES: Yes. We will do that.

4 Mr. Chairman, we'd like to call Michael Warner.

5 CHMN. CHENAL: Mr. Warner, would you prefer an
6 oath or an affirmation?

7 MR. WARNER: An oath.

8

9

MICHAEL WARNER,

10 called as a witness herein, having been first duly sworn
11 by the Chairman to speak the whole truth and nothing but
12 the truth, was examined and testified as follows:

13

14

DIRECT EXAMINATION

15 BY MR. MOYES:

16 Q. Mr. Warner, you should have in front of you a
17 copy of your prefiled testimony that was marked as
18 Exhibit RE-23. Was that testimony prepared by you or
19 under your direction?

20 A. Yes.

21 Q. Are there any changes that you wish to make to
22 your prefiled testimony at this time?

23 A. No.

24 Q. If I were to ask you any of the questions in
25 that testimony here today under oath, would your answers

1 be different?

2 A. No.

3 Q. Thank you.

4 And, also, we previously identified the
5 application as RE-24, and Mrs. Solomon spoke to that.
6 But can you describe for the Committee your role in the
7 preparation of the application itself.

8 A. Yes. I'm the executive in charge for this
9 project, and so I oversaw the management of that project
10 and have been involved in preparing testimony for this
11 project and summarizing the content that's being
12 portrayed in this proceeding.

13 Q. And, Mr. Warner, did you also attach some
14 biographical information to your written testimony?

15 A. Yes.

16 Q. Would you again please summarize some of your
17 professional background and highlight that for us.

18 A. Yes. I've been a professional planner for over
19 30 years. Much of my concentration of my professional
20 background is in planning, especially transmission lines
21 for utilities.

22 I've presented previously to this Committee
23 seven times. This will be my eighth.

24 I have a degree in agronomy from Brigham Young
25 University and a degree in landscape architecture, a

1 master's degree in landscape architecture and
2 environmental planning from Utah State University. I'm
3 the founder and president of Transcon Environmental.

4 Q. Mr. Warner, can you describe for us a little
5 bit more what the particular responsibilities for
6 Transcon were for the RE Papago Gen-tie Project.

7 A. Typically, we're involved in both land planning
8 and environmental studies that were necessary to
9 accumulate and prepare the exhibits for the CEC
10 application.

11 Q. And I know, Mr. Warner, that you've prepared
12 some visual presentations that supplement your written
13 testimony and highlight a lot of the questions that are
14 included in that prefiled testimony. Are you prepared to
15 present that now at this time, and then we can follow up
16 with additional questions at the end?

17 A. Yes.

18 Q. Please proceed, then.

19 MR. WARNER: Jason, if you could put up that
20 slide on the Google Earth.

21 I'm going to provide some context a little bit
22 which has already been covered, but a little bit more.

23 I'd like to go through those images. We saw
24 one of them. The first three images -- go to the next
25 slide, please. The first three you saw the -- there.

1 That's what I wanted.

2 These first three depict different simulations
3 of that three-pole and H-frame structure, and we'll go
4 through those in a minute. And then we also have some
5 drone imagery.

6 Now, as you recall from the maps that have
7 previously been prepared, this site is about 40 miles
8 from here, just down the highway on the other side of
9 Tonopah. Tonopah is separated from the planned solar
10 facility by a little hill called Burnt Mountain. So
11 Tonopah is on one side. And then you go a little bit
12 further west about five miles, and on the other side of
13 the hill is the valley where Delaney Substation is
14 located and Salome Road cuts through.

15 On the south end of the site, about 2 miles
16 away from Delaney Substation, is some BLM land. I think
17 it starts about a mile from the substation. And there's
18 a hill that rises up, and that's Saddle Mountain. So
19 it's in that little valley. So you're going to see that
20 in some of the simulations.

21 Let's go ahead and take a look at -- I don't
22 know that we need to see all the simulations unless the
23 Committee chooses to do that. But let's look at the
24 H-frame design simulation. We saw the monopole
25 simulation. Let's look at that real quick.

1 Now, you can see that hillside over there on
2 the range. That's Burnt Mountain. It will turn --

3 CHMN. CHENAL: Which direction is that,
4 Mr. Warner?

5 MR. WARNER: That's to the east, and this is to
6 the south. So that mountain that you see in the distance
7 there is Saddle Mountain.

8 Now we're looking to the west, and you can see
9 it's flat and broad.

10 CHMN. CHENAL: Okay.

11 MR. WARNER: Okay. Jason, after this is done
12 and completed, then let's take a look at the drone
13 imagery.

14 The drone imagery was shot a couple of weeks
15 ago, maybe a month ago. So this is going to be a 360
16 photograph, so you're going to see some of the other
17 structures. And that's relevant to the other testimony
18 that we're going to have in a moment about visual impact.

19 So let's just scan around. Go a little bit
20 slower, Jason. I want to digest that. I want to point
21 out some things. Stop there for just a second.

22 Roll back to the left so we can get people
23 oriented here.

24 Okay. So the photo that is depicted here, the
25 drone image is taken approximately where the substation

1 site is.

2 So pan down, straight down. So you can see the
3 plant material and things like that you're accustomed to
4 seeing out on these large plateaus.

5 Now pan to the substation again. This is
6 looking to the east, and you can see Burnt Mountain
7 there.

8 Now pan to the right. Keep panning to the
9 right. Now, notice -- stop there for a moment. And you
10 can see some of these structures that are here.

11 So this is the south side of the substation,
12 right? Site control for this -- Recurrent site control
13 exists all the way to the edge of this property right
14 here. And they don't have site control for that side or
15 the far side. You can see this transmission line coming
16 up and then cutting across here.

17 There's also -- you can barely pick them out,
18 but there are two substations -- or, I mean, two
19 transmission lines that parallel on the other side,
20 500 kV transmission lines.

21 On the other side of this substation is State
22 land. We'll see that again in a minute.

23 Pan around just a little bit more. Look to the
24 south. Salome Highway. You see that road right there.
25 That's Salome Highway.

1 Keep going.

2 And that's Saddle Mountain right there.

3 Now we're looking more or less to the west.

4 Keep rolling around.

5 And that's the -- that pole line was the
6 Harquahala intertie.

7 Keep rolling.

8 Off in the distance here, you can't quite see
9 it, is I-10. It cuts across there someplace.

10 All right. Let's go to the next slide. I want
11 to walk through a little bit of the public outreach
12 process.

13 The public outreach process is really divided
14 into two components. The first component is really about
15 getting the power plant approved. So beginning in 2019,
16 a lot of the applications and the public outreach
17 activities were related to a couple of activities that
18 were being done.

19 One of those things that were being done was a
20 Comprehensive Plan Amendment that needed to occur. The
21 comprehensive plan accounted for some of the industrial
22 uses. This area was largely agricultural, large-acre
23 residentials, 1 acre in lot, and so converting that to
24 the long-term plan. That was done at the end of 2020.

25 So at the end of 2020, they got the

1 Comprehensive Plan Amendment. So the outreach activities
2 included a lot of information about the solar plant. And
3 the substation and the transmission line are a very small
4 piece of those outreach activities. So you can see those
5 blended in.

6 Later, the next step in that planning process
7 was really to get the zoning done. That's under way.
8 But they had some outreach activities that were related
9 to that as well.

10 Once the application was ready to get started
11 for this hearing, and that's been done in combination,
12 then those activities went out for another round of
13 outreach activities, and they also had public meetings.
14 Public meeting were in open houses, and they invited
15 people to come in. And it was a format where they would
16 just walk up, and folks would explain the process. They
17 were lightly attended. I think they had maybe five or
18 six people attending those meetings, typically.

19 The comments that were received as a result
20 those outreach activities were really -- there were
21 property owners that were interested in either selling
22 their property or they were very interested in what was
23 happening as a result of that.

24 So on the last page of your application,
25 there's a summary table that has the comments summary.

1 And I think it's depicted nine people that basically had
2 commented or engaged. Some were along in the process in
3 the responses there. But most were favorable. Some were
4 concerned about their land. One particular one that was
5 initially in opposition to the project was interested in
6 selling their property, and I think Recurrent negotiated
7 with them and got site control on their property as well.
8 So that ended up amicably.

9 CHMN. CHENAL: Mr. Warner, where, again, is the
10 table?

11 MR. WARNER: It's the very last page in
12 Exhibit J.

13 CHMN. CHENAL: Of the application?

14 MR. WARNER: In the application, yes.

15 CHMN. CHENAL: Thank you.

16 MR. WARNER: It's listed as J-5, Public
17 Responses.

18 MR. MOYES: Mr. Chairman, if I might interrupt
19 briefly, it might be a good time for us to -- and I don't
20 know if we can do it, Jason, without too much difficulty.
21 The table that Mr. Warner is describing was also
22 submitted as an exhibit for this hearing under Tab RE-18.

23 Q. BY MR. MOYES: Mr. Warner, does this tab --
24 this table represent the same table that you were
25 describing in the application?

1 A. The table in this exhibit is actually the one
2 that summarizes the sequence of the outreach activities.
3 And so it's an important document to tell when those
4 things happened and where they occurred and who was
5 notified.

6 The table I was referring to is actually what
7 those nine people said, so they're two different
8 exhibits. But I'm glad you pointed that out. This goes
9 through and explains the various steps and outreach
10 activities and why they were performed.

11 Q. I'm sorry for jumping the gun and talking about
12 the wrong table.

13 Let's go back to RE-24.

14 A. Yes.

15 MEMBER NOLAND: Mr. Chairman.

16 CHMN. CHENAL: Member Noland.

17 MEMBER NOLAND: Mr. Chairman, Mr. Warner, did
18 you say the zoning has not been granted yet?

19 MR. WARNER: That's correct. It's in play.

20 MEMBER NOLAND: Well, what does that mean?
21 Where are you in it?

22 MR. WARNER: The application has been provided.
23 Staff is supporting the change. It just hasn't gone
24 through the process yet. It's going to happen in the
25 next six weeks, probably.

1 MEMBER NOLAND: So you're going from a rural to
2 an industrial use; is that correct?

3 MR. WARNER: That's correct. And then it has
4 an overlay district on it as well as a planned unit
5 development. So there's an overlay district that allows
6 the -- it's an industrial use with an industrial overlay.

7 MEMBER NOLAND: Okay. Thank you.

8 MEMBER HAMWAY: Is that granted through
9 Maricopa County Board of Supervisors?

10 MR. WARNER: Yes.

11 MS. SOLOMON: Yeah, I would just say the
12 Maricopa County BOS sign-off is probably two to three
13 months away.

14 MR. WARNER: Now, the applications that --
15 well, let me get into that.

16 So let me go through and just -- again, for
17 contextual purposes, the area is flat in this particular
18 area. You saw that in the simulation. And Interstate 10
19 is approximately 10 miles to the north. There are no
20 nearby residents. And this is a collection point for
21 many transmission lines that come through the area.

22 In regard to the alternatives, there are two
23 alternatives for this project, and they're depicted on
24 the right-hand-side screen. You can see one that's got
25 an angle and one that goes straight. One has four poles;

1 one has three. Both go into the same bay that APS has
2 decided for the applicant to go into. The substation
3 site of 13 acres is close, as close as it can reasonably
4 be.

5 I'd like to step through the CEC application
6 and some of the ingredients that are there.

7 Land ownership is private. On the right-hand
8 screen, you're going to see the light blue area that's
9 depicted. That's all State lands. And the
10 mustard-colored land is the traditional BLM, and you can
11 see the topography there where Burnt Mountain is. So on
12 the east and on the south, you've got the State lands.

13 The applicant has almost 3,000 acres under site
14 control, and they basically have site control for the
15 east and -- or, I mean, on the west and on the north.

16 The existing land in this -- Committee Member
17 Noland, this is the zoning, RU-43 Rural Zoning District,
18 1-acre unit. And then the future zoning is the
19 Industrial 2 with that industrial planned unit
20 development.

21 A lot of utilities in here in terms of the
22 private use. You can see this map -- again, you saw this
23 earlier, the one that's depicted on your right. The
24 colors could have been better chosen. This is BLM down
25 here, but this mustard-colored up here, this brighter

1 mustard-colored, is the Recurrent Energy properties that
2 they have. And the Delaney Substation is depicted there
3 in that light blue shadow color.

4 Our summary and conclusions for land use is
5 it's compatible with the existing infrastructure and
6 setting. This area seems to be clearly accommodating
7 transmission lines, and future transmission lines seems
8 to be what they want to use it for. It's compatible with
9 the General Plan as approved now and the future land
10 uses. Local permitting for the transmission lines and
11 related facilities have received no public or agency
12 opposition.

13 The one item that's different for their
14 development plan is they're requesting a variance from
15 their existing -- modification from the standards for
16 their development plan to allow a higher structure. The
17 code requires a 124-, 125-foot, and they're taking that
18 to 140 just because of the size of the 500 kV lines.
19 This is something that's been granted in the past and
20 hasn't received any opposition from Staff in terms of
21 whether it's going to be approved, but it's a detail
22 that's in the documentation that we've provided to you.
23 And it's a slight deviation of what they've got in their
24 code, but Staff supports that approach.

25 Biological resources. Let's walk through that.

1 This is rural and primarily undeveloped. Old history had
2 this area as being under agriculture at some point, but
3 it's basically creosote fields now and has returned to
4 desert. It's part of the Lower Colorado Subdivision, the
5 sonoran desert scrub, and there's no water on it.

6 We've conducted surveys for the area. There
7 are two species of interest. One is the desert tortoise.
8 That's a candidate species under the Endangered Species
9 Act. And another one is the borrowing owl, which is
10 protected under the Migratory Bird Treaty Act.

11 We know that the solar plant has burrowing owls
12 on it. But on the surveys for this area, they don't have
13 any. And there is an exhibit that was just --
14 correspondence that we just received from Arizona Game
15 and Fish that clarified their expectations as to how to
16 treat those two particular species.

17 And I think we've got an exhibit on that, don't
18 we?

19 MR. MOYES: Yes. Can we pull up on the screen
20 Exhibit RE-18, please.

21 MR. WARNER: As he's bringing that up, the
22 clarification letter was intended to just -- there's some
23 correspondence there between Brian and our staff and
24 State Lands to -- or, I mean, Fish & Game to determine
25 their method of performance of preconstruction surveys.

1 And so this letter depicts what their
2 expectations are, both for protecting species and
3 performing those surveys to make sure that we're meeting
4 their expectations.

5 The upshot is that they're expecting the
6 substation and transmission line to be compatible with
7 their standards for bird strikes and also that they avoid
8 impacting the desert tortoise. This isn't very good
9 habitat for the desert tortoise. They usually go to the
10 hills. So there's not very many down in this area and
11 there was no evidence of some on site, but they did find
12 one down in the valley closer to one of the hills. And
13 so we're expecting that's a possibility.

14 And preconstruction surveys are really also
15 embedded in this conversation as how are they going to be
16 done. And there was a clarification about whether we can
17 do both of the surveys at the same time. It was agreed
18 that that was fine. But there's no problem with meeting
19 these conditions that they've explained.

20 There are really no expectations to encounter
21 or influence the Endangered Species Act -- or endangered
22 species. There's no critical habitat. It's a pretty
23 straightforward site. No corridors that run through the
24 area.

25 MEMBER NOLAND: Mr. Chairman.

1 CHMN. CHENAL: Member Noland.

2 MEMBER NOLAND: Are there any gas lines,
3 natural gas lines, in the area?

4 MR. WARNER: No.

5 MEMBER NOLAND: Thank you.

6 MR. WARNER: Okay. Moving on to visual
7 resources.

8 Okay. There are no management areas for visual
9 resources in the area. The County doesn't have visual
10 resource management framework there. The BLM land is
11 distant. It would be hard for them to see the lines, and
12 they have management -- visual resource management
13 criteria for their mountain, but this is a long ways
14 away.

15 A big part of the evaluation here was visual
16 impacts from roads, like Salome Road. You saw the
17 condition of Salome Road. It's basically a dirt road out
18 there. That's where the -- and Indian School Road, which
19 is depicted -- I'm going to point it out on this map here
20 on the right.

21 Whoops. Sorry, I think I'm pressing the green
22 button that tells me I'm hitting the laser, and it's the
23 green button that says go.

24 This is Indian School Road here, and then these
25 are the locations where we've got visual simulations and

1 along Indian School Road.

2 There are no home out here, as I already
3 mentioned, so there wasn't really a reason to do anything
4 from a -- location from a home setting, so the visual
5 simulations are there.

6 As I pointed out in the drone imagery, you can
7 see transmission lines that are there already in the
8 substation. So when performing the visual study for this
9 area, we concentrated on what is the contrast value
10 because the use was basically for utility in this area
11 primarily. And now we needed to determine whether there
12 was going to be a high contrast. And as you can imagine,
13 it was either weak or moderate for any of the
14 simulations.

15 MEMBER HAMWAY: Mr. Chairman.

16 CHMN. CHENAL: Member Hamway.

17 MEMBER HAMWAY: So do you use galvanized steel
18 or do you do -- use the rusted steel like TEP uses, or
19 what does Recurrent Energy use?

20 MR. WARNER: Thank you, Chairman, Commissioner.

21 MEMBER HAMWAY: I got two promotions in one.

22 MR. WARNER: Committee Member.

23 MEMBER HAMWAY: Member.

24 MR. WARNER: Member -- thank you.

25 MEMBER HAMWAY: Hamway. There you go.

1 MR. WARNER: There you go.

2 Galvanized steel.

3 MEMBER HAMWAY: Pardon?

4 MR. WARNER: Galvanized steel.

5 MEMBER HAMWAY: Okay.

6 MR. WARNER: And the reason for that in this
7 particular setting is you don't have some of those
8 values, that patina that you got on some of the other
9 hills down in Kingman, where that brown was really
10 prominent. So galvanized steel is a common use for this
11 area.

12 MEMBER HAMWAY: Okay.

13 MR. WARNER: So that's what's being proposed.

14 Okay. Cultural resources.

15 Q. BY MR. MOYES: Mr. Warner.

16 A. Yes.

17 Q. Before you move away from the visuals, could
18 you briefly describe for the Committee Members -- I
19 mentioned it in our opening statement. The placemat that
20 they have in front of them has some visual depictions.
21 Could you describe in a little more detail what those
22 visual simulations on the left of the front show for
23 them.

24 A. Sure.

25 And I think there are some larger -- there are

1 some larger ones in their application itself under --
2 under Exhibit G. So they're a little bit larger format
3 that will allow you to sort of thumb through them.

4 But as you can see, the substation -- or, I
5 mean, the towers themselves, with the other
6 infrastructure either in the foreground along Salome Road
7 or from any of those locations, is really -- it's
8 difficult to tell that there is really a modification.
9 And that's, I guess, characteristic of the weak contrast
10 value that you would expect.

11 We chose areas to do the key observation points
12 from places where people were actually going to be
13 traveling. The other condition that contributes to that
14 low value is that they're probably driving. They're not
15 walking around out there. So their views are fleeting.
16 So it's going to be a low contrast almost any way that
17 you slice it.

18 Thanks for bringing those up, Jason.

19 So what you see on the screen there are the
20 simulations with little red arrows pointing out of the
21 towers.

22 Let's go back to the PowerPoint presentation,
23 Jason, where we left off. Cultural resources is where I
24 think we were going to go. You can go to the conclusions
25 slide. That's fine.

1 So under the cultural resources, there's really
2 a nice summary, if you're interested in Tonopah history,
3 in the application. It will be some good reading for
4 this evening for you.

5 The Cultural Resource Study , as it relates to
6 things on site, the area, as I mentioned before, was
7 previously under agriculture. And so it was disrupted,
8 and we couldn't find any evidence of anything on site,
9 and it's not likely that there would be anyway. There's
10 not water around here or any reasons why there would be a
11 lot of historic or cultural resource information.

12 We did a Class I survey and confirmed that
13 previous sites and surveys didn't have any sites that
14 were eligible or in that vicinity or that we would be
15 impacting.

16 CHMN. CHENAL: Mr. Warner, could you just
17 remind me and remind the Committee the difference between
18 a Class I and a Class III cultural study.

19 MR. WARNER: Sure.

20 Class I survey really goes back and looks at
21 all previous sites and surveys that were done, and they
22 pull those together. There are some recent ones that
23 were done here for the Ten West Link Corridor that came
24 into the substation, and it included our study area. It
25 wasn't formally published yet, so you don't see it on the

1 maps, but it covered the area and basically didn't have
2 any sites on it.

3 Now, when they did their study -- when you
4 actually complete a Class III study, that means you send
5 archeologists, and they walk along and they do transects,
6 and then they record stuff. That goes into a database,
7 and that's the database that you examine when you're
8 doing a Class I study. You just look at everything that
9 was already done and see whether you've got to survey
10 anything. So that's what was done in our case.

11 CHMN. CHENAL: Where is this information held?
12 Is there some central repository?

13 MR. WARNER: There is. And you can get it in
14 different repositories. So the BLM holds one repository,
15 and the State holds that portion of that repository as
16 well. So you want to be able to get it from, you know,
17 whatever jurisdiction has got management responsibility
18 for that data. But in some cases, like in the Forest
19 Service, they might not share all of their information
20 with the State, and so you want to get it from both
21 places.

22 CHMN. CHENAL: Thank you.

23 MR. WARNER: Uh-huh.

24 So we're not expecting to see any sites. There
25 were no sites in previous studies, and we're not

1 expecting any cultural resource impacts on this site.

2 Recreation. Saddle mountain is approximately 2
3 miles to the south. There are no recreation amenities or
4 corridors or trails crossing the site, so no impacts to
5 recreation.

6 Noise and interference with communications
7 signals. There aren't any towers, at least within a
8 mile. And I think in our last hearing, we examined the
9 distance that the towers would create interference.
10 There's nothing even close to those distances. So we're
11 not expecting any radio or broadcasting interference at
12 all.

13 Let me walk through the newspaper ads. I think
14 these were touched on already, so I'm going to do this
15 very quickly. This is just a summary of those in
16 newspaper ad, and it contains information there.

17 The postcards. You can see there, there's the
18 total number of people that received the postcard in
19 response to the hearings.

20 This is a map depicting those locations that
21 was already discussed in the exhibit.

22 The latest postcards were mailed in May 27th,
23 and as was already testified, we didn't receive any
24 responses from those.

25 In conclusion, I think in terms of the

1 exhibits, we conducted the prerequisite and robust
2 examination of the site and performed the public
3 involvement to the degree that was appropriate,
4 especially under the circumstances for this site.

5 The project appears to be compatible in every
6 respect for both alternative substations. There doesn't
7 seem to be any material difference between either of
8 those two alternatives.

9 And I think the applicant is requesting a
10 500-foot corridor for the three or four transmission line
11 towers.

12 MEMBER HAENICHEN: Chairman.

13 CHMN. CHENAL: Member Haenichen.

14 MEMBER HAENICHEN: Could you go back to that
15 last picture that was on the screen.

16 MR. WARNER: Maybe.

17 MEMBER HAENICHEN: Why would you even propose
18 the one on the right? They're so close together and,
19 obviously, it's got a turning structure and one more
20 total structure. Why did they even propose that? Just
21 to have an alternative?

22 MR. WARNER: I'm probably not the best one to
23 ask.

24 MS. SOLOMON: Yeah, I can jump in here. This
25 is Marina Solomon again.

1 So the straight configuration is definitely our
2 base case and preferred route. But project substations,
3 it is important for them to be on very level ground, and
4 we haven't done detailed soil testing in the area. So
5 when we're finalizing and getting prepared for
6 construction, there's the possibility that we could need
7 to put the substation in a different location. We just
8 wanted to give ourselves that flexibility.

9 MEMBER HAENICHEN: To give you some more
10 flexibility.

11 MS. SOLOMON: Yeah. But I think it's pretty
12 likely we would be going with a linear configuration.

13 MEMBER HAMWAY: Mr. Chairman, we're not
14 approving both of them, are we, both of the alternatives?

15 MS. SOLOMON: I'm not sure how that works
16 exactly.

17 CHMN. CHENAL: That's what I was thinking. I
18 mean, normally, we don't.

19 MS. SOLOMON: Okay.

20 CHMN. CHENAL: We approve one alternative or
21 the other, or we approve a general corridor, if you will,
22 where it would be located. So I guess that raises a
23 question because you want your flexibility. I think we
24 can appreciate that. Maybe we have to give a little
25 thought to, if we approve a CEC, what area we approve it

1 for.

2 How much -- Member Noland, please jump in,
3 but -- okay.

4 How do we describe those two areas for the
5 proposed substation? I can't remember. Do you just have
6 maps, Mr. Moyes, or actually do you have a legal
7 description? I don't remember. It's one or the other.

8 MR. MOYES: In the application, I don't know
9 that we have a full metes and bounds legal description
10 for each one.

11 CHMN. CHENAL: So it's just a map?

12 MR. WARNER: I think we prepared a legal
13 description for just the preferred alternative.

14 CHMN. CHENAL: Just the preferred alternative?

15 MR. WARNER: Uh-huh.

16 MS. SOLOMON: But both are located within the
17 same land parcel.

18 CHMN. CHENAL: Right, but -- yes.

19 MEMBER NOLAND: Mr. Chairman.

20 CHMN. CHENAL: Member Noland.

21 MEMBER NOLAND: Is it Mrs. or Ms. Solomon?

22 MS. SOLOMON: Ms. Solomon.

23 MEMBER NOLAND: Ms. Thank you.

24 You're wrong. It's Ms.

25 How many acres do you think are involved in the

1 substation on the left-hand side of the screen?

2 MS. SOLOMON: This is depicting an area of 13
3 acres.

4 MEMBER NOLAND: And how many on the right-hand
5 side?

6 MS. SOLOMON: So I'm talking about the yellow
7 box, and it's 13 acres for both those areas.

8 MEMBER NOLAND: Why don't you make it 26 acres
9 so that you have the flexibility to locate it? I know
10 that would maybe foul up the transmission line, but
11 really not that much.

12 I don't know why we couldn't do both,
13 Mr. Chairman. I can't remember in 12 years where we've
14 done that. I thought before, we've just done a larger
15 area for the substation so that they had the flexibility
16 to locate it based on the terrain.

17 MS. SOLOMON: Uh-huh.

18 MEMBER NOLAND: But the only thing I'm
19 wondering about is the location of the connection.

20 CHMN. CHENAL: And if I can jump in, the
21 east-west portion of the transmission line is the same in
22 both the proposed --

23 MS. SOLOMON: Yeah.

24 CHMN. CHENAL: -- the preferred and the
25 alternate. So it's just a little bit of the dog leg

1 there on the alternative.

2 MEMBER HAMWAY: Mr. Chairman, this differs from
3 the other one that we denied to have when they requested
4 two lines. This differs from that because it is using
5 the exact same location within the substation that APS
6 has granted them.

7 The other one that we denied, they actually
8 wanted two options, one coming from the north and one
9 coming from another direction, and that's what we denied.
10 They're not really asking for this here. They're not
11 asking for two separate locations.

12 What my concern in the other case was, was the
13 lack of opportunity for competition. If we granted two
14 openings, then that would give them a head start. And
15 that's not what they're asking here. This is a different
16 application, obviously, but it's a different question.

17 MS. SOLOMON: Yeah. It's just a different
18 location within our project site, but it would be
19 terminating in the exact same location with the Delaney
20 Substation.

21 MEMBER HAMWAY: And that's different. We
22 turned one down a few months ago because they wanted two
23 entry points, two separate entry points, and we didn't
24 give them that.

25 MS. SOLOMON: Okay.

1 CHMN. CHENAL: Member Palmer.

2 MEMBER PALMER: It would appear to me that a
3 fairly simple solution to that would be to make the
4 corridor wide enough that it could encompass either of
5 those routes and then perhaps what Member Noland stated
6 and then the parcel for the substation large enough that
7 gives them flexibility to go either direction. And
8 without giving them two entrances going into the
9 substation, it would probably accommodate what they're
10 trying to do.

11 CHMN. CHENAL: And, Member Palmer, I was
12 thinking the same thing. Just as an alternative, if we
13 use -- I'll call it the Noland-Palmer solution. It's
14 almost as elegant as the foam-on-the-beer solution.
15 That's the best of all time.

16 But if we created a corridor or what have you
17 for the placement of the substation which would combine
18 the two locations which are depicted up there and we
19 called out a corridor that started, you know, to the
20 north and came to the south and then went east and we
21 approve that as a corridor, the applicant would have the
22 flexibility to use all or a portion of the corridor for
23 the transmission line and could have the entire area to
24 place the substation. And then we'd still have a
25 specific area for where the line would have to go, the

1 transmission line. It couldn't be put anywhere within
2 those 26 acres, but it would be a defined area.

3 But if they ended up with their proposed, they
4 wouldn't need that portion of the corridor, the
5 north-south portion. They just wouldn't need it, but it
6 would still be there if they needed it because of the
7 topography.

8 MEMBER NOLAND: Mr. Chairman.

9 CHMN. CHENAL: Member Noland.

10 MEMBER NOLAND: We have done this before with
11 substations where we took like a 40-acre parcel that they
12 described because they weren't sure where they were going
13 to be able to place it. So I think the Noland-Palmer
14 solution is really a good way to go and gives you the
15 most flexibility.

16 And seeing as how -- I mean, we've gone up to
17 3,000 feet on a corridor before. You just have to look
18 at where the boundaries are of one line as compared to
19 the other and the substation and see if you can get it
20 within that type of a corridor.

21 CHMN. CHENAL: Now, I also think, though,
22 that -- and please correct me if I'm wrong. I do think
23 we need to be rather specific with the corridor for the
24 transmission line itself. This is a highly congested
25 area. And we're going to hear from Ms. Grabel and

1 Ellwood more tomorrow, and I think their concern is that
2 they know where this approved line is going to be. It's
3 not just anywhere within the 26 acres or however many
4 acres it is for the substation to be located, but the
5 transmission line itself will be a known area within a
6 defined corridor. To me, I think that's important.

7 MEMBER PALMER: Mr. Chairman, if I might, the
8 point that it enters the substation is pretty well
9 defined at this point. How it gets to that point maybe
10 needs a little flexibility, and I think that would give
11 not only the applicant, but Ms. Grabel's group, some
12 certainty as to what options they have going forward.

13 CHMN. CHENAL: Well, we're going to hear from
14 Ms. Grabel and her client tomorrow.

15 And this is just for discussion, but I think we
16 have approved in the past not a proposed alternative, but
17 a particular specific corridor. And I think this -- what
18 we've been discussing, the Noland-Palmer solution, I
19 think might accommodate that.

20 Member Haenichen.

21 MEMBER HAENICHEN: Maybe we could just ask the
22 applicant and Ms. Grabel's group tonight to draw up
23 something that personifies this discussion we just had,
24 and then that would help us as a framework for tomorrow.

25 MEMBER PALMER: Mr. Chairman, and also Member

1 Noland and I will be negotiating tonight to see whether
2 it's Noland-Palmer or Palmer-Noland.

3 CHMN. CHENAL: Well, that's a procedural issue
4 within my jurisdiction, and I've already ruled on that,
5 Member Palmer. If you want to call it the Palmer-Noland
6 solution, you go tell Member Noland and see how that
7 works for you.

8 MEMBER GRINNELL: Mr. Chairman.

9 CHMN. CHENAL: Yes. Member Grinnell.

10 MEMBER GRINNELL: My only question is, are we
11 encroaching or impeding on any other personal or private
12 property issues as long as there's no -- where there
13 might be a concern that's -- when you're talking about
14 expanding an area, you also have to make sure we don't
15 encroach on somebody else's personal property without
16 their approval.

17 MS. SOLOMON: The area we are considering is
18 all within our project site control, and any area that we
19 would be including would be within our site.

20 CHMN. CHENAL: Member Grinnell, did you hear
21 the answer?

22 MEMBER GRINNELL: Yes. Thank you.

23 CHMN. CHENAL: Okay.

24 MR. MOYES: Mr. Chairman, if I may --

25 CHMN. CHENAL: Yes, Mr. Moyes.

1 MR. MOYES: Just to clarify for the record, a
2 question for Ms. Solomon: Is it fair to say that
3 RE Papago, the applicant's intent all along in proposing
4 these two alternatives in the application was to reach
5 the conclusion that the Noland-Palmer solution provides
6 in terms of a designated route for the gen-tie into
7 Delaney but the flexibility to accommodate either/or of
8 the two alternatives that were proposed in the
9 application?

10 MS. SOLOMON: That sounds accurate.

11 MR. MOYES: So you were not requesting two
12 separate connections or two separate certificated areas;
13 rather, one large corridor, as we've described it, with
14 the flexibility to potentially do either of those?

15 MS. SOLOMON: Yeah, that's right.

16 MR. MOYES: Okay.

17 CHMN. CHENAL: Well, then my question for
18 Mr. Warner is, do you have a legal description that
19 covers both potential substation sites and a specified
20 500-foot corridor for the transmission line?

21 MR. WARNER: We can get one promptly.

22 CHMN. CHENAL: That's what I thought.

23 Okay. That's good.

24 Now, any further questions on that?

25 (No response.)

1 CHMN. CHENAL: I don't think we should close
2 Mr. Warner's testimony tonight, but it's 5:15 and I think
3 we should have a little break before the 5:30 public
4 comment. I don't know if there will be anyone that
5 appears or not, but this might be a good place just to
6 stop. That way, if there's any additional testimony of
7 Mr. Warner tomorrow, we can have it tomorrow and get him
8 back to describe the legal description and what the
9 attachments might look like to a CEC.

10 But with that in mind, any further questions
11 right now of Mr. Warner?

12 (No response.)

13 CHMN. CHENAL: Mr. Moyes, Ms. Grabel, we'll
14 pick it up tomorrow at 9:30.

15 And, Ms. Grabel, you'll have a witness?

16 MS. GRABEL: I will, Mr. Chairman. Thank you.

17 And just for clarification, I know that
18 Mr. Haenichen suggested that my client could put together
19 some drawings or specifications. I'm not sure that
20 that's necessarily appropriate for us to do so if it's
21 their CEC. Do you understand?

22 MEMBER HAENICHEN: Well, I was just thinking of
23 having something for talking points for us.

24 MS. GRABEL: Yes. So I will be prepared with a
25 witness to elaborate more on what we were talking about

1 earlier.

2 CHMN. CHENAL: Any sense of how long this might
3 take in the morning? Do you know how much further you
4 have? Mr. Moyes and then Ms. Grabel.

5 MR. MOYES: We only have a few closing
6 questions for Mr. Warner in terms of our prepared
7 witnesses.

8 The discussion with regards to Ellwood and
9 easements I guess is anyone's guess in terms of how that
10 plays out in the morning and how long their witness may
11 take.

12 CHMN. CHENAL: I'll ask Ms. Grabel the same
13 question.

14 MS. GRABEL: So, I mean, just by way of
15 context, we agreed to forbear testimony in this case
16 because we thought we had agreed to language and a
17 condition that gave Ellwood some comfort that they would
18 have an easement on that route just north of the Thomas
19 Road alignment.

20 We heard some testimony today that caused us a
21 little bit of concern because there was testimony about a
22 route that was viable for my client that didn't involve
23 an easement, which struck us as odd, and also some that
24 we disagreed with. And so I think having a technical
25 witness kind of give the project description from their

1 perspective and kind of reaffirm what we believe that
2 condition was intended to represent would be appropriate.

3 I don't think it's going to take hours. I
4 think it's, you know, an hour tops.

5 CHMN. CHENAL: All right. So it looks like
6 we'll finish in the morning, and then we can begin
7 deliberations after lunch. I'm not holding anyone to
8 that. If it takes longer, it takes longer. And everyone
9 knows my preference. If we get into the afternoon and --
10 you know, some length into the afternoon, I'll probably
11 recommend that we start the deliberations Wednesday
12 morning. But this time it looks kind of like we'll be
13 able to start the deliberations in the afternoon right
14 after lunch, and I think that's appropriate to do it at
15 that time.

16 MEMBER PALMER: What time do we convene? Is it
17 9:00 or 9:30? You said 9:30, but I thought I had seen
18 9:00. I just want to make sure I show up on time.

19 CHMN. CHENAL: I'm going to look at a document
20 that says what it is, the Notice of Hearing.

21 MR. MOYES: 9:30 a.m.

22 CHMN. CHENAL: Is it? Okay.

23 All right. So anything else we should talk
24 about, the Committee, before we adjourn for the evening?

25 Anything, Mr. Moyes or Ms. Grabel?

1 MR. MOYES: I don't believe so.

2 CHMN. CHENAL: Okay.

3 MS. GRABEL: Just a reminder, I mentioned
4 earlier, Chairman, that I do have to leave at 4:00
5 tomorrow for a prior engagement. So, to the extent we
6 could negotiate the condition, if there is any
7 negotiation prior to then, I would appreciate that.

8 CHMN. CHENAL: Sure. We'll -- if we start
9 deliberations -- excuse me. If we start our
10 deliberations right after lunch, we'll be finished by
11 4:00.

12 MS. GRABEL: Thank you.

13 CHMN. CHENAL: All right. So let's adjourn,
14 and we'll wait for the 5:30 public comment. We'll
15 adjourn, and then we'll reconvene tomorrow at 9:30.

16 Thanks.

17 (A recess was taken from 5:20 p.m. to
18 5:42 p.m.)

19 CHMN. CHENAL: Good evening, everyone. This is
20 the time set for the public comment portion of this
21 hearing.

22 And my understanding is we have two people, the
23 fire chief from the neighboring fire district, as well as
24 someone on the Zoom. So if we can start with the fire
25 chief.

1 Sir, if you would get up and give us your name
2 and position. And we're interested in hearing your
3 comment with respect to the project, and then we'll go to
4 the gentleman who's on the Zoom and then we'll see if
5 there's anyone else.

6 So thank you for coming and providing your
7 comment this evening.

8 CHIEF MCMENEMY: Thank you, Board Chairman and
9 Board. Thank you for allowing us to be here.

10 My name is Jeff McMenemy. I'm fire chief of
11 the Harquahala Valley Fire District, which is located
12 right in that main area of the proposed project.

13 I'd like to express our extreme support of the
14 project. We follow everything out there very closely,
15 being a very rural kind of impoverished town, a lot of
16 agriculture out there, so we're always looking at new
17 ways to benefit the community.

18 We see this project being not only an economic
19 stimulus by the jobs it would create out there, but also
20 the gateway to other development projects down the road,
21 whether they're, you know, infrastructure or better
22 roads, those kind of things, storage for gas. The
23 potential goes on and on.

24 But the biggest thing we look for out there is
25 community -- holistic community involvement. And I can

1 say from the very beginning, from the very first sign
2 that went up out there, the Papago project has been
3 calling us all the time, emailing us to make sure
4 whatever we need community related, whether it's the food
5 drives, the toy drives for the children out there, our
6 barbecues, anything that has to do with the community,
7 they've been very involved. And they've been very
8 attentive and very supportive of our projects.

9 And I'm also a member of the board -- board
10 member for the Harquahala Benefits Foundation out there.
11 And they deal with a lot of impoverished kids in the
12 community out there. And I'd also like, on their behalf,
13 to extend the backing of their project and the thank you
14 for their support that they've given to the Benefits
15 Foundation.

16 CHMN. CHENAL: Thank you, Fire Chief. Thank
17 you very much. We appreciate it.

18 Next, we have a gentleman. If you would
19 provide your name and just a basic contact information,
20 like an email address or something or phone, so that if
21 later we need to get in contact with you regarding this
22 project to give notice, we can do so.

23 So we'll hear from you, your name, contact
24 information, and thank you for taking the time to appear
25 tonight and provide comment.

1 MR. TURNER: No problem.

2 My name is Chad Turner. I'm the superintendent
3 of Arlington Elementary School. You can reach me at
4 chadt@arlingtonk8.org. My phone number is 623-764-2382.

5 I'd like to say thank you for the opportunity
6 to comment on this important project. Like I said, I
7 serve as the principal and superintendent of the
8 Arlington Elementary School District. I've been employed
9 with the school district for 25 years now. The school is
10 located nearby and the project is within our school
11 district.

12 I'd like to express my support for this
13 project. The area has seen significant development of
14 energy projects over the years, including gas-fired
15 generation, transmission, infrastructure, solar plants.
16 And I'd like to say that the solar plants and the
17 development of the solar plants have been very beneficial
18 to our district. One is the tax impact they have that
19 supports the school, and they're very environmentally
20 friendly.

21 This project is suitable for this size -- or
22 for this area. The size and scope of this project is, in
23 my opinion, very suitable for this area. If Recurrent is
24 successful in building this project, I encourage them to
25 get involved with the school and the community, and I

1 look forward to them being a part of the community in the
2 future.

3 I urge the Committee to approve Recurrent's
4 application. Thank you for your support.

5 CHMN. CHENAL: All right. Thank you very much
6 for your comment, sir.

7 Is there anyone else who would like to provide
8 public comment to our Committee either appearing by Zoom
9 or in person in our hearing room?

10 (No response.)

11 CHMN. CHENAL: I don't see anyone in our
12 hearing room that would fit that description, and I don't
13 see anyone else online.

14 Jason, can you confirm that, please?

15 MR. MOELLER: I don't see anyone online either
16 from the list of people I have here. We're good.

17 CHMN. CHENAL: All right. Well, it looks like
18 that's it. We did start a few minutes after 5:30, and
19 it's now approximately ten till 6.

20 So we'll close the public comment portion of
21 the hearing, and we'll see everyone tomorrow at 9:30 and
22 resume the hearing.

23 Thank you.

24 (The hearing recessed at 5:48 p.m.)

25

1 STATE OF ARIZONA)
2 COUNTY OF MARICOPA)

3

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5 taken before me; that the foregoing pages are a full,
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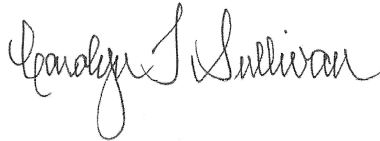
11 I CERTIFY that I am in no way related to any of
12 the parties hereto nor am I in any way interested in the
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14

15 I CERTIFY that I have complied with the ethical
16 obligations set forth in ACJA 7-206(F)(3) and ACJA
17 7-206(J)(1)(g)(1) and (2). Dated at Phoenix, Arizona,
18 this 28th day of June, 2021.

19

20



21

22 CAROLYN T. SULLIVAN, RPR
23 Arizona Certified Reporter
24 No. 50528

25

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27 I CERTIFY that COASH & COASH, INC., has complied
28 with the ethical obligations set forth in ACJA
29 7-206(J)(1)(g)(1) through (6).

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