BEFORE THE ARIZONA POWER PLANT AND TRANSMISSION LINE SITING COMMITTEE

LS 316

IN THE MATTER OF THE APPLICATION OF AURORA SOLAR LLC IN CONFORMANCE WITH THE REQUIREMENTS OF ARIZONA REVISED STATUTES §§ 40-360, ET SEQ., FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AUTHORIZING THE OBED MEADOW 230-KV GENERATION TIE-LINE PROJECT, WHICH INCLUDES THE CONSTRUCTION OF A SUBSTATION AND GENERATION TIE-LINE ORIGINATING APPROXIMATELY 2.4 MILES SOUTHWEST OF THE APS CHOLLA SUBSTATION ON PRIVATE LAND UNDER THE JURISDICTION OF NAVAJO COUNTY, ARIZONA, AND TERMINATING IN THE APS CHOLLA SUBSTATION IN NAVAJO COUNTY, ARIZONA.	DOCKET NO. L-21254A-23-0184-00222 LS CASE NO. 222 EVIDENTIARY HEARING

At: Flagstaff, Arizona

Date: August 9, 2023

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REPORTER'S TRANSCRIPT OF PROCEEDINGS
VOLUME III
(Pages 296 through 455)

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BE IT REMEMBERED that the above-entitled and numbered matter came on regularly to be heard before the Arizona Power Plant and Transmission Line Siting Committee at Little America Hotel, 2515 East Butler Avenue, Flagstaff, Arizona, commencing at 9:00 a.m. on August 9, 2023.

BEFORE: ADAM STAFFORD, Chairman

GABRIELA S. MERCER, Arizona Corporation Commission
LEONARD DRAGO, Department of Environmental Quality
DAVID FRENCH, Arizona Department of Water Resources
(Via Videoconference)
R. DAVID KRYDER, Agriculture Interests
SCOTT SOMERS, Incorporated Cities and Towns
(Via Videoconference)
ROMAN FONTES, Counties
(Via Videoconference)
MARGARET "TOBY" LITTLE, PE, General Public
COL. JON H. GOLD, General Public

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

With us today we have representatives from APS, if we could take appearances from APS, please.

MR. DERSTINE: Good morning, Mr. Chairman, committee members. Matt Derstine, appearing on behalf of Arizona Public Service Company, appearing with me is Linda Benally, regulatory counsel for APS.

CHMN STAFFORD: Thank you.

Mr. Crockett, I believe you had some additional exhibits to -- you would like to admit.

MR. CROCKETT: Yes, Chairman Stafford. And if we could recall witnesses Hadley and Hoffbuhr, we do have some additional exhibits, and then I do have some additional direct examination for these witnesses before we move on this morning to the APS witness.

CHMN STAFFORD: Okay. Remember, the witnesses are still under oath.

Thank you.

D I R E C T E X A M I N A T I O N (Cont.)

BY MR. CROCKETT:

Q. Good morning, Mr. Hadley.

A. (MR. HADLEY) Good morning.

Q. What you have before you and I've placed in

front of the Line Siting Committee members --

Oh, and let me -- let me just mention, Chairman Stafford, these exhibits we --

Mr. Miner, were we able to forward the PDF copies of these additional exhibits to Mr. Brewer to forward to the members online?

A. (MR. MINER) Yes, we did, and a copy also went to the court reporter.

MR. CROCKETT: Okay. And then each of the members in the -- committee members in the room have copies of these exhibits.

Q. So, Mr. Hadley, yesterday we were talking about an exhibit to be late filed that was referenced as OM-26.

Do you have a copy of that exhibit in front of you?

A. (MR. HADLEY) Yes.

Q. And is this Exhibit an image taken from the virtual tour that shows a possible fifth structure type that might be used in the Obed Meadow gen-tie?

A. Yes, it is.

Q. Okay. And did you prepare this exhibit based on the -- the virtual tour?

A. (MR. HADLEY) Yes.

Q. And then, Mr. Hadley, yesterday we had some discussion in the afternoon regarding the fact that there

is not a System Impact Study that has been completed at this point in time, which includes the proposed Obed Meadow gen-tie project with the substation.

Have you had occasion to go back and look at the docket over the last 18 to 24 months to determine whether there have been other cases where the Line Siting Committee has approved a CEC and the Arizona Corporation Commission has approved a CEC where the applicant did not submit a System Impact Study?

A. (MR. HADLEY) Yes, we have.

Q. And did you identify at least three examples of that?

A. (MR. HADLEY) That is correct. I believe they are cases 206, 202, and 196.

Q. Okay. And I'd like to take those in reverse order, beginning with case 206.

Mr. Hadley, was case 206 a case involving the West Camp Wind gen-tie project?

A. (MR. HADLEY) Yes.

Q. And is that a case where there was an evidentiary hearing held on October 11th and 12th in 2022?

A. (MR. HADLEY) Correct.

Q. If I could direct your attention to Exhibit OM-27. Do you have that exhibit?

A. (MR. HADLEY) I do.
Q. And would you please identify that exhibit for the record?
A. (MR. HADLEY) That is Exhibit 27, it is the Staff recommendation letter from October 4th, 2022.
Q. And that pertains to the West Camp Wind project?
A. (MR. HADLEY) Correct.
Q. If I could direct your attention to the second page of that letter, there's some highlighted language there.
A. (MR. HADLEY) Yes.
Q. Do you see that?
A. (MR. HADLEY) I do.
Q. So with regard to the first -- the second full paragraph on page 2, what -- would you please describe what Staff's analysis is in that paragraph?
A. (MR. HADLEY) Sure. And, if I may, I may just read from the letter to be accurate.
Q. Please.
A. (MR. HADLEY) "Since the proposed project includes two different levels of interconnection at the Cholla Substation, separate studies needed to be conducted to determine the effects, if any, on the transmission system. APS conducted a cluster System Impact Study, SIS, for the 345-kV option. The study

evaluated the effects of the 345-kV option, along with other projects in the APS interconnection queue, and concluded there would be negative impacts on the APS transmission system and would require new transmission lines and transformers to be constructed to mitigate the effects.

However, West Camp stated a very small portion of the identified impacts were attributed to the 345-kV project and that if any of the other projects in the study cluster were withdrawn from the queue, transmission impacts would be diminished or eliminated. The applicant indicated that a facility study would be done on the proposed 345-kV line early in 2023 to further study any potential system impacts."

And then, if I may, I'd like to read the small un-highlighted paragraph below to provide more evidence.

Q. Please.

A. (MR. HADLEY) "The applicant also stated that APS was in the process of conducting the study for the 500-kV option, and did not have the results yet, therefore, staff was unable to determine any potential impacts on the electrical grid for this option of the project."

Q. Just to finish the analysis here, what was Staff's conclusion and recommendation?

A. (MR. HADLEY) Certainly. And I will recite again

from the letter. "Based on Staff's review of the application, as well as the applicant's response to a Staff-issued data request, Staff is unable to fully comment on whether the proposed project could improve the reliability, safety of the grid, and the delivery of power in Arizona. At this point, an individual SIS has not yet been prepared for the 345 gen-tie option, and the SIS that was prepared, in addition to other projects in the APS review queue, identifies significant impacts to the APS transmission system. Further, Staff believes that the study for the proposed 500-kV gen-tie line needs to be completed to fully evaluate the proposed project. Therefore, Staff recommends the Line Siting Committee allocate sufficient time during the hearing to review the System Impact Study that was not yet complete at the time of Staff's review of the project."

Q. Okay. Thank you.

And, Mr. Hadley, was the issue of -- of the lack of a System Impact Study addressed at the hearing on this CEC application?

A. Yes, it was.

Q. And I have placed before you an exhibit, which has been marked as OM-28, is that Exhibit OM-28 an excerpt of a part of the transcript from the West Camp Wind Farm CEC hearing?

A. (MR. HADLEY) That's correct.
Q. And that was a hearing that took place on October 11th, 2022?
A. (MR. HADLEY) Yes, sir.
Q. And how -- well, let me just -- how did you select these particular pages of the transcript that are included here?
A. (MR. HADLEY) The pages we included in Exhibit OM-28 directly pertain to the discussions around the interconnection studies and status of the overall APS review.
Q. Okay. And then if I could direct you -- let's start with page 59 of that transcript. So this is -- is it your understanding this is questioning from Mr. Acken, the attorney for the applicant here?
A. (MR. HADLEY) Correct.
Q. And I -- and there's a question from Mr. Acken, beginning on line 7. Do you see that?
A. (MR. HADLEY) I do.
Q. Would you please read the question and the answer?
A. (MR. HADLEY) Certainly. The question, "And APS will not enter into a large generation interconnection agreement without assurance that the applicant or the interconnecter would address all of the necessary

upgrades to ensure the reliability and safety of the grid; is that correct?"

And the answer from a Mr. Unrein is, "That's correct."

Q. So, Mr. Hadley, would you please briefly describe the -- the steps in working with a utility, such as APS, to interconnect to the grid, the steps that would go through -- that the applicant would go through and, in fact, the steps that the applicant, Aurora Solar, in this case is going through with APS?

A. (MR. HADLEY) Certainly. So the first step for a generation project would be to submit an interconnection request with the appropriate utility, in this case APS, at which point the utility would then begin their review process of such request through a System Impact Study. So the first deliverable from the utility back to the generator would be the System Impact Study, which we have not yet received for our project. The System Impact Study would lay out the potential impacts to the grid, including that project, at which point the applicant can then decide to proceed with the request if they decide that the mitigation requirements or the lack thereof are sufficient for the project, at which point the utility would move forward in the process, and complete a facility study. It's a little more granular look at the

grid, and the project, and its direct impact to the interconnecting location.

At which point once the facility study is received from the utility, if the developer or the applicant proceeds to move forward and agrees to any additional requirements from the utility, we would then look to move to a large generation interconnection request, or a LGIA for short, at which point we would, as a company, agree to any binding request from the utility before being able to ultimately construct and interconnect.

Q. And this process, Mr. Hadley, is there any way that, for example, Aurora Solar could interconnect to the grid through the Cholla Substation in a way that would be -- that would cause the system to be unreliable or unsafe in any way?

A. (MR. HADLEY) Absolutely not.

Q. So if I could turn your attention back to Exhibit OM-28, this -- this issue was discussed at the hearing, and I'd like to turn your attention to page 112 and we've highlighted some language, beginning at line 16.

Is that a comment from Chairman Katz?

A. (MR. HADLEY) Yes.

Q. And would you -- would you read his comment

there?

A. (MR. HADLEY) Sure. "I was going to try to avoid going here, but I'm going to. Are you familiar with the October 4th letter from the Arizona Corporation Commission and their recommendations to this committee?"

Q. Okay. And that's Staff's letter commenting upon the reliability and safety of the -- the application here?

A. (MR. HADLEY) That's correct, as provided in our OM-27 exhibit.

Q. Okay. And then, lastly, on this exhibit, I turn your attention to page 114, we're going to begin at the bottom. And beginning at line 25, there's a question that Chairman Katz is posing, beginning with the highlighted language, "What is likely to happen," would you read that question and then the answer on -- following onto the second page or the next page there?

A. (MR. HADLEY) Sure. "What is likely to happen if the CEC is granted, but sometime during the construction of the project it is determined that there will be system problems if the project is connected? Or asking it another way, would you be waiting until you got clearance through appropriate studies before building out this project only to be told it's too late now, you spent all this money, but you can't hook into our existing system?"

The answer from Mr. Unrein, "We would never be in that situation, because we need a large generator interconnection agreement with APS in order to legally commence construction of our wind farm."

MEMBER FONTES: Chairman?

MR. HADLEY: Oh, Please continue.

CHMN STAFFORD: Member Fontes? I heard somebody called Mr. Chairman.

MEMBER FONTES: I did not, but I do have some questions, Mr. Chairman. And also on the opinions of Mr. Hadley when we conclude, so thank you for recognizing me.

CHMN STAFFORD: Okay. Thank you.

Please proceed.

BY MR. CROCKETT:

Q. So I think, Mr. Hadley, you were going to pick up with the question and answer beginning on line 12 of page 115?

A. (MR. HADLEY) That's correct. Thank you.

From Chairman Katz: "And that's really what I wanted to confirm is that you're not going to be building the wind farm or the transmission lines without first getting that agreement approved by your company and by Arizona Public Service."

The response from Mr. Unrein, "That's correct."

Q. Mr. Hadley, did the Line Siting Committee approve CECs for, let me look at my notes here, CECs 1 and 2 for the West Camp Wind gen-tie project?

A. (MR. HADLEY) Yes.

Q. And did the Arizona Corporation Commission subsequently approve those CECs in Decisions 78810 and 78811 on December 15th, 2022?

A. (MR. HADLEY) Yes.

Q. And those decisions by both the committee and the Commission were both unanimous votes in favor?

A. (MR. HADLEY) Correct.

Q. So, Mr. Hadley, is this Case 206 an example of a situation where you had both a system -- both a finding by Staff of potential negative impacts, as supported by the System Impact Study, and also a lack of a System Impact Study altogether for a portion of the project, where the CEC application was nevertheless approved by the Commission?

A. (MR. HADLEY) That's correct.

Q. And, Mr. Hadley, did you have a chance to look at the CEC -- the two CECs that were approved in this Case 206?

A. (MR. HADLEY) Yes.

Q. Did those CECs have specific conditions in them addressing the System Impact Study or Staff's finding

regarding the project or any -- any requirement that anything additional happened with regard to the filing of the System Impact Study?

A. (MR. HADLEY) No.

Q. Mr. Hadley, next, I would like to turn your attention to Case 202 that you described, which is the case of Atlas Solar tie line project.

Are you -- are you generally familiar with that case?

A. (MR. HADLEY) Yes, I am.

Q. And the docket number in that case is L-21187A-22-0078-00202?

A. (MR. HADLEY) Yes.

Q. And I've, again, placed before you an exhibit which has been marked as OM-29.

Would you please identify that exhibit for the record?

A. (MR. HADLEY) Yes, that is the letter from the Arizona Corporation Commission, dated May 5th, 2022, with recommendations based on the review or a subsequent data request of the Atlas Solar tie line project.

Q. Okay. And the Atlas project -- okay. So on page 2 of that letter, would you please read the highlighted language?

A. (MR. HADLEY) Certainly. "Staff requested a

System Impact Study, SIS, from Atlas to fully analyze the effects on the bulk transmission system that the proposed project would have. To date, Staff has not received any SIS from the applicant and, therefore, is not able to comment on whether the proposed project improves the reliability and/or safety of the operation of the grid and the delivery of power in Arizona."

Q. And, Mr. Hadley, did the Line Siting Committee approve CECs 1 and 2 for Atlas Solar on May 13th, 2022?

A. (MR. HADLEY) Yes.

Q. And were those CECs subsequently approved by the Arizona Corporation Commission in Decisions 78620 and 78621 on July 11th, 2022?

A. (MR. HADLEY) Yes.

Q. So is this -- again, is this another example of a CEC that was approved in the absence of a System Impact Study?

A. (MR. HADLEY) That's correct.

Q. Were you able to look at the transcript of the hearing from this one, Mr. Hadley?

A. (MR. HADLEY) We did not purchase this transcript, no, sir.

Q. Okay. But in your review of the docket, did you -- were you able to review the actual CECs themselves?

A. (MR. HADLEY) Yes.
Q. Did you find any language in these CECs that addressed the lack of a SIS or any -- or impose any additional requirements related to Staff's finding or the lack of a SIS?
A. (MR. HADLEY) No.
Q. And I notice in this CEC, and it appears that in the other CECs we've looked at, is there a finding of fact, for example, Finding of Fact 2, in the CEC for this application, that states, "The project aids the state, preserving a safe and reliable electric transmission system"?
A. (MR. HADLEY) Correct.
Q. And did that condition also exist, to your knowledge, in the West Camp CEC?
A. (MR. HADLEY) Yes.
Q. And does that, again, indicate a -- that the Line Siting Committee was able to make a finding of -- that the project would be safe and reliable in the absence of a System Impact Study?
A. (MR. HADLEY) Correct.
Q. Okay. And then, finally, Mr. Hadley, you referenced a decision or a Case Number 196, Solar Pepper Power, LLC; is that correct?
A. (MR. HADLEY) Yes, I did.

MR. CROCKETT: And, Chairman Stafford, we don't -- we weren't able to produce an exhibit to enter into the record on this, we can -- we can perhaps provide a late-filed exhibit, but I will simply talk about the -- the Staff letter in this one and if we need to late file a copy of the letter so the record's complete, we're happy to do that.

Q. Mr. Hadley, did you review a copy of a letter from Utilities Division Staff, dated November 23rd, 2021?

A. (MR. HADLEY) Yes.

Q. And is this a case that involved three potential interconnection locations?

A. (MR. HADLEY) That's correct.

Q. And is it the case that in this application there was a System Impact Study supporting two of the three points of interconnection, but not for the third?

A. (MR. HADLEY) Correct.

Q. And did the Line Siting Committee approve CECs 1 and 2 for Solar Pepper on December 8th, 2021?

A. (MR. HADLEY) That's correct.

Q. Do these CECs also include the finding that the project aids the state in preserving a safe and reliable transmission system?

A. (MR. HADLEY) Yes.

Q. And were these -- were these two CECs approved

by the Arizona Corporation Commission in Decisions 78430 and 78431 on January 31, 2022?

A. (MR. HADLEY) Yes.

Q. And is this another example of a line siting case where a CEC was approved where one of the points of interconnection did not have a supporting System Impact Study?

A. (MR. HADLEY) That's correct.

CHMN STAFFORD: Mr. Crockett, we can just take official notice of that docket, you don't need to file an additional exhibit for Line Siting Case 196.

MR. CROCKETT: Okay. Thank you, Chairman Stafford.

And just for the record, the docket number on that case is L-21165A-21-0341-00196.

Q. So, Mr. Hadley, to kind of sum up a couple of things here, is -- is there a mechanism in place that ensures that the reliability of the electric grid is maintained -- is preserved and the safety is preserved outside of the issuance of the CEC itself?

A. (MR. HADLEY) That is correct. The interconnection process and the detailed studies that the utilities are required to complete before entering into a LGIA would suffice for that need.

Q. Okay. Thank you.

Chairman Stafford, at this time I would move the admission of Exhibits OM-26, OM-27, OM-28, and OM-29.

CHMN STAFFORD: Exhibits OM-26 through 29 are admitted.

(Exhibits OM-26 through OM-29 were admitted into evidence.)

MR. CROCKETT: And then, Chairman Stafford, I would just like to point out a couple of other things for the record that we touched upon yesterday. We talked a bit about ARS 40-360.02, which has to do with the filing of 10-year plans. Over the -- overnight I was able to spend a little more time with that statute and I wanted to highlight a couple of things.

First of all, subsection C is what describes what needs to be included in the 10-year plan and it states, "Each plan filed pursuant to subsection A or B of this section shall set forth the following information with respect to the proposed facilities, to the extent such information is available." And I wanted to highlight the language "to the extent such information is available." Of course, the seventh item on that list is the plans for any new facility shall include a power flow and stability analysis report showing the effect on the current Arizona electric transmission system.

So I would submit that in this case we have

submitted the information that was available, and that it's not -- it's not a requirement of the CEC process that a System Impact Study be submitted. We will acknowledge that in -- in a large majority of the cases, there is a System Impact Study that is -- that has been submitted.

In this case there was not. We're going to talk a little bit more, I think with the APS witness, about the status of that request, and -- and the reasons why it's taken some time to get there, but I wanted to note that.

The other thing I will note for the record is under that same statute, 40-360.02, subsection G, it states that the plans, meaning the plans, the 10-year plans that are submitted, shall be reviewed biennially by the Commission and the Commission shall issue a written decision regarding the adequacy of the existing and planned transmission facilities in this state to meet the present and future energy needs of this state in a reliable manner.

I highlight that because I point out that it is -- it is the Commission's role, specifically under the statute, and not the Line Siting Committee to review these 10-year plans that are submitted, and to determine whether or not they -- their impact on the safety and

reliability of the system, I would note that as the record or the evidence indicates in this proceeding, there were 10-year plans submitted in 2022 and 2023 for this project. There was no -- and in each of those -- those plans, which I've reviewed overnight, the applicant indicated that an interconnection request had been submitted, and that a System Impact Study was pending. The Commission didn't take any action, having filed those in the dockets, they didn't -- there wasn't anything where they followed up on that. So, again, I -- I made the arguments yesterday that I believe that jurisdictionally this committee can certainly proceed ahead with a vote on these two CECs in the absence of a System Impact Study, and I think that, to the extent that there was a concern that there was -- that this would establish a precedent, I would -- I would submit that there are already three cases in the last 20 months where there has been -- there have been CECs issued in the absence of a SIS, and certainly, with a SIS or a portion of a SIS that finds that there were specifically negative impacts on the safety and reliability of the grid.

So that's what I wanted to cover this morning with Mr. Hadley. He's certainly available to answer questions at this point in time.

MEMBER LITTLE: Mr. Chairman?

CHMN STAFFORD: Yes, Member Little.

MEMBER LITTLE: Just to clarify, Mr. Crockett, those two subsections, C and G, refer to the 10-year -- what needs to be in a 10-year plan, correct?

MR. CROCKETT: That's correct.

MEMBER LITTLE: Not in the CEC application?

MR. CROCKETT: Chairman Stafford, Member Little, that is correct. The contents of the CEC application are set out in the Arizona Administrative Code, and then also I think the statute refers to the findings in 360-06 that this Line Siting Committee needs to make. And to that point, as we evaluate the statutes that apply here, it appears clear to us that the role and responsibility of the Line Siting Committee is to look at the impact of this project on the environment and the focus is there, and that the focus is not on this committee evaluating the -- the impact of the system on the reliability or safety of the grid, that -- there's a separate process that looks at those issues.

MEMBER LITTLE: Just -- Mr. Chairman?

CHMN STAFFORD: Proceed.

MEMBER LITTLE: Just a comment. That is absolutely true as far as the responsibility with the biennial transmission assessment. However, those studies

are generally based on 10-year plans that are in place prior to the time the study begins, which is the year before the -- the assessment is issued. And, hence, the need for projects to actually file 10-year plans when they are anticipated, as the statute requires.

MEMBER FONTES: Mr. Chairman, I've got some items for clarification, if I may?

CHMN STAFFORD: Yes, Member Fontes, please proceed.

MEMBER FONTES: Good morning.

The purpose indeed is to focus on the environment, but in order to locate the environment, we need to understand the project, the individual components, and the impacts on the system. So make no mistake, the System Impact Study is extremely relevant to look at any environmental factors in all projects.

I will note, for the record, that all those projects had commercial offtake that you mentioned, 206, 202, and 196, so there was a clear and definitive commercial offtake or interconnection, in the case of the Atlas system to the Ten West Link, which was a transmission line that goes from Arizona to California, sponsored by the CAISO. So those projects have a lot of distinct attributes than your project. Your project is still a part of a cluster study that's undefined.

So as we look at that, my first question is, can Mr. Hadley tell who makes the final determination of the impacts on the reliability of the system, the safety of the grid, and the benefits to the state of Arizona? Is that the applicant or is that indeed the utility that you interconnect with, for the -- for the -- for the record here.

MR. CROCKETT: And Chairman Stafford, Member Fontes, Mr. Hadley can answer the question, to the best of his knowledge, I think it's probably a legal answer on that, but I'll let -- I'll let Mr. Hadley provide his nonlegal opinion on that.

MEMBER FONTES: Yeah, because he did make a lot of nonlegal opinions that -- on those three items, so that's why I want to clarify that. If that is indeed a legal opinion, I think this committee needs a legal opinion on that, not a personal opinion from the applicant.

MR. HADLEY: Chairman Stafford, Member Fontes, that is certainly not a legal opinion. And to answer your question more directly, it would certainly not be the applicant that would come up with that answer; I would believe it would be the utility, in this case, APS.

MEMBER FONTES: Thank you for the

clarification.

The other thing is, when does that actually issue, the opinions -- the legal opinions with respect to reliability, safety on the grid, and impacts? Is that at the issuance of the LGIA or at the end of the System Impact Study, just so we know the timing of that?

MR. HADLEY: Chairman Stafford, Member Fontes, I would say that it is more around the System Impact Study timing; however, as we pointed out with the West Camp project, the results of the System Impact Study are preliminary, and there are additional steps in the interconnection study process.

For example, in the West Camp case, they had negative findings without certain mitigation measures required. At that point, if we were to receive similar results, we would request, make any type of commitments to APS that's required to continue this study, but I would suggest that the result of the System Impact Study are not always concurrent with the final result of the connecting project.

MEMBER FONTES: I'd like to ask Mr. Crockett when we bring the APS folks on, and I'm curious on this and I don't know the answer to this, but at the end of the System Impact Study, do they have a view or do they have an opinion on those three items, or

is that at the end of the facilities study or when they issue the LGIA? The timing of those three things, I think, is very useful to inform, you know, our work here on the committee, and so that we can make an informed determination on this unique project as it relates in good cause and in our discretion with respect to whether we need the System Impact Study complete or not.

Again, this is a -- each project is unique, is my theme here, and all those projects you had had a different set of circumstances than this one. Appreciate the background, but I'm not seeing a direct linkage to this project in terms of where you're at.

Mr. Chairman, back to you.

CHMN STAFFORD: Thank you.

MR. CROCKETT: And, Chairman Stafford, Member Fontes, just to briefly respond, there is an APS witness that is here today, and APS has their legal counsel and he will be presenting the witness and providing, my understanding, some direct testimony and then, obviously, he would be available to answer questions.

MEMBER FONTES: Perfect. Much appreciated.

CHMN STAFFORD: Are there any further questions from members for the current panel?

(No response.)

CHMN STAFFORD: No? All right.

Mr. Derstine, would you like to call your witness and we can get him sworn in? Do you plan on offering direct testimony to begin or would you like just to have the committee start peppering with questions?

MR. DERSTINE: Mr. Chairman, committee members, my --

CHMN STAFFORD: Can you move your mic closer to your mouth, please.

MR. DERSTINE: Yeah, let me pull it up. Can you hear me now?

CHMN STAFFORD: Yes.

MR. DERSTINE: Does it work?

What I propose to do, and what we anticipated doing, was to provide some basic direct testimony through Mr. Spitzkoff, and on what I understand and have kind of heard this through Mr. Crockett by way of what transpired yesterday in the committee hearing, that the committee had some questions about the interconnection process, the time it's taken for this applicant, Aurora Solar, to receive the System Impact Study for this particular project. And then potentially some questions around how the reliability of an interconnection is insured through the interconnection process. So my plan was to cover those through

Mr. Spitzkoff, and then make him available for questions, if that's acceptable.

CHMN STAFFORD: Yes, that is acceptable.

MR. DERSTINE: Mr. Spitzkoff's available to be sworn.

CHMN STAFFORD: All right. Mr. Spitzkoff, would you prefer an oath or affirmation?

MR. SPITZKOFF: An affirmation.

(Jason Spitzkoff was duly sworn by Chairman Stafford.)

CHMN STAFFORD: Please proceed, Mr. Derstine.

MR. DERSTINE: Thank you, Mr. Chairman.

JASON SPITZKOFF,

called as a witness on behalf of APS, having been previously affirmed or sworn by the Certified Reporter to speak the whole truth and nothing but the truth, was examined and testified as follows:

D I R E C T E X A M I N A T I O N

BY MR. DERSTINE:

Q. Mr. Spitzkoff, why don't you state your name and your address for the record, please.

A. (MR. SPITZKOFF) My name is Jason Spitzkoff,

S-p-i-t-z-k-o-f-f. My work address is 2121 West Cheryl Drive, Phoenix, Arizona 85021.

Q. Mr. Spitzkoff, you are manager of transmission engineering and other matters relating to transmission planning, why don't you start by identifying the -- your position and explain -- give the committee an understanding of what you do in that role and your experience.

A. (MR. SPITZKOFF) Certainly. So my current role, I'm manager of three departments at APS, transmission planning and engineering is one; transmission contracts and services is a second; and transmission and facility siting is a third group.

All of those deal with various portions of generator interconnection projects, among other responsibilities, such as all long-term system reliability studies that are performed. My experience, I've been with APS for 22 years. I started at APS basically out of -- out of college. After I graduated with an electrical engineering and economics degree from Rutgers University, I started as a transmission planning engineer I, and progressed to engineer II, III, senior, supervisor of transmission planning and engineering, and now my current role as manager.

Q. In your position, and with that experience, do

you have personal knowledge of APS's large generator interconnection process, as well as this particular application for an interconnection?

A. (MR. SPITZKOFF) I do. So I -- for many years while I was a frontline engineer, I performed many interconnection studies. That was back when our interconnection queue was a lot smaller and we had a lot fewer interconnection requests, and we were performing those studies wholly in-house.

Then when we started utilizing outside consultants to help APS with the actual performance of the power flow studies, I oversaw the consultants performing that work, and then as supervisor, again, you know, just oversaw the process as a whole, and still as a manager managing the team responsible for the technical studies, and then also the transmission contracts and services team, which is the one -- the team responsible for administering the process, and ultimately, crafting and signing the interconnection agreements themselves.

Q. All right. Thank you. We're going to get into, and I know the committee had questions about the timing or the timeline for this interconnection request for the Obed Meadow gen-tie project, but before we do that, let me have you step back and kind of cover, in general, the interconnection process and what governs the

interconnection process for an application, such as the Obed Meadow gen-tie project.

A. (MR. SPITZKOFF) Certainly. So the interconnection process is mandated by FERC open access rules, and it was established as part of FERC Order 2003. And it established what is known as Appendix O in APS's open access transmission tariff, and that is all of the -- that's the large generator interconnection process, and that spells out all of the rules that utilities and applicants have to follow in an interconnection process.

I apologize, was there more to your question?

Q. Well, that -- so I think you've identified what governs the process, why don't you take us through the process; there's a submittal of an interconnection request, why don't you take us forward from that point?

A. (MR. SPITZKOFF) Certainly. So the first step is an applicant would request interconnection through an application, and that also requires a deposit to be submitted with that application. APS operates a cluster study process, so we have two six-month windows in which we gather all interconnection requests into a single cluster. And our windows are from April 1st to September 30th, and then October 1st to March 31st.

So, for instance, any application that comes in

between April 1st and September 30th, in any given year, no matter if it comes in April 2nd or September 29th, they all are within the same cluster grouping. So we get the application, we get the deposits, once they're deemed a valid application, a project is assigned a queue number. We -- then when the window closes and we know all of the projects that are in that cluster, we start holding scoping meetings with each of the applicants, and that scoping meeting makes sure that APS and the applicant are clear on the requests, the point of interconnection, the details, et cetera. We provide what information we know about the system at that time, just at that point of interconnection, with just, you know, just general -- general knowledge. And then we provide an estimated date on when we will start their interconnection study work itself.

And then, you know, then we perform first the System Impact Study. That System Impact Study consists of power flow and stability analysis, and that analysis identifies the impacts that adding all of the projects into that -- that are in that cluster onto the grid, what it would have to the reliability of the system. And any -- if there are any reliability violations, then we have to identify what is required to mitigate whatever violations are identified.

As part of the interconnection process, the FERC rules, a utility cannot turn an application away. We cannot just say no, we don't want you to interconnect, you can't interconnect. We have to process all interconnections, and if there are reliability impacts, we do get to identify what those impacts are, and that's a condition of achieving actual interconnection, I'm sorry, the -- the mitigation of those impacts, so what -- the network upgrades that are identified are a condition of receiving what will ultimately be an interconnection application. So while we can't turn interconnection requests away, you know, we -- we are required to identify and make sure all projects can interconnect without a negative impact on the reliability of the system.

Q. Let me stop you there for a second. Wouldn't it be more efficient or better to analyze each interconnection request on its own merit rather than analyzing them as a cluster? Why do you -- why are they analyzed as a cluster?

A. (MR. SPITZKOFF) Certainly. So when the LGIP was first enacted after FERC Order 2003, APS did perform what's known as serial interconnection studies, so you get one application, two applications, three applications, you study the first project, then when

that's done you study the second project, then when that's done you study the third.

The interconnection studies take quite a long time, even if you're studying one interconnection customer, where it takes quite a long time to finish that first one, and then you get to the second one, which takes a while, and then you get to the third one. So the idea is clustering projects together is a more efficient way of studying groupings of projects, and it also allows for if multiple projects have the same impacts and need the same reliability upgrades, then they are assigned a share, a proportional share of the cost of implementing those impacts.

Q. Okay. So you identified two deliverables that happen through the process, one is the System Impact Study, which is part of the focus and the attention of the committee here today; the second item was the facilities study, what's the difference between the two?

A. (MR. SPITZKOFF) Sure. So the facility study is a deeper dive into the costs and time estimates for the identified upgrades that are required. So the System Impact Study identifies what those upgrades are, it does also provide an estimate -- cost and time estimate for completing those, but when -- when a project continues to move to the next step, which is the facilities study,

that doesn't consist of reliability studies anymore, those are completed in the System Impact Study. What the facility study is is a deeper dive into the cost and timing of completing each of those network upgrades, so it's a better estimate at that -- at that stage.

Q. Now, is this --

MEMBER GOLD: Chairman?

CHMN STAFFORD: Member Gold.

MEMBER GOLD: I'm trying to understand a word. You said a deeper dive into the cost and what --

MR. SPITZKOFF: Time estimates.

MEMBER GOLD: Gotcha. Thank you.

CHMN STAFFORD: Yeah, can you get closer to the microphone, Mr. Spitzkoff, please?

Okay. Thank you.

MEMBER LITTLE: As long as we're paused, Mr. Chairman.

CHMN STAFFORD: Yes, Member Little.

MEMBER LITTLE: So let me just clarify, Mr. Spitzkoff, every application for interconnection, every project is included in the cluster?

MR. SPITZKOFF: Every project is included in a cluster that shares the same window.

MEMBER LITTLE: Right. No, I understand that, but --

MR. SPITZKOFF: Yes.

MEMBER LITTLE: So we can be assured, we the committee, can be assured that if a project is included in a cluster, and we get the System Impact Study that says that there are no negative impacts, we can be assured that that project is included in the cluster if it is said it is?

In other words, you don't decrease the amount, if you have a total of 500 megawatts or a thousand megawatts in your cluster that apply, you don't analyze 800 megawatts, assuming that some won't get built?

MR. SPITZKOFF: Correct. We study every project.

MEMBER LITTLE: Thank you.

MR. SPITZKOFF: Now, there are, within the studies there might be points that are identified leading up to the total amount. As you do a study, you find different, like, at 800 megawatts, there are no issues, but when we go up to the thousand megawatts, if that's, you know, the number, here -- here are the issues. That's not always the case, you know, but sometimes, you know, some natural system results fall out that are reported out.

MEMBER LITTLE: And if that is the case,

are the -- is the cost -- this is just for my own information -- if that is the case is the cost of those mitigation measures split amongst everybody or only paid for by the incremental project?

MR. SPITZKOFF: They're split among everybody who has an impact or a need for that identified upgrade.

MEMBER LITTLE: Okay.

MR. SPITZKOFF: So everyone within the same cluster has the same point in time of review, so there's no hierarchy.

MEMBER LITTLE: Thank you. Thank you.

CHMN STAFFORD: So quick question on that. So in the scenario you're talking about, say there's a thousand megawatts in the cluster, but then the first 600 megawatts can come on without any mitigation required, the last 400 requires upgrades, how -- how do you account for that?

MR. SPITZKOFF: Certainly. So all of the projects would be assigned a cost responsibility for the upgrades. And if the projects are on a different development timeline, some, you know, might go into construction early, you know, because they have offtakers earlier, we will go and identify, okay, if just this amount comes online, what are the impacts? Do we need

these network upgrades or not? If the answer's no, we won't just launch into the building of those network upgrades, but that doesn't mean that project is off the hook for those, because if the other projects that were in its cluster do develop, and we cross that threshold where we need those network upgrades, now everyone who was assigned costs for those network upgrades is required to pay whatever their share was.

CHMN STAFFORD: So the entire thousand megawatts would share the cost, then?

MR. SPITZKOFF: Yes. I'll put one minor caveat on it. Some upgrades -- so you -- you determine the proportional impact of each project on each network upgrade, so -- so there might be some projects that actually have no impact on a singular particular upgrade within a cluster, and they wouldn't necessarily share that cost. So a little caveat on -- on that statement.

CHMN STAFFORD: So is it the cost is allocated, like, in a pro rata basis --

MR. SPITZKOFF: Yes.

CHMN STAFFORD: -- of a cost causation, I'm assuming?

MR. SPITZKOFF: Yes, basically that's it.

CHMN STAFFORD: All right. Thank you.

Please proceed.

MEMBER FONTES: Mr. Chairman, can I ask for an item of clarification here?

CHMN STAFFORD: Yes, Member Fontes.

MEMBER FONTES: Thank you very much, Mr. Spitzkoff. Very useful to understand the approach of APS and the interconnect. With respect to the output of the System Impact Study is where you identify the mitigants, what an individual project would have to do, could that determine the placement of both structures or how they're going to interconnect with conductor onto a specific busbar or additional physical attributes that that individual project's going to have to put in when the cluster's complete?

I know I'm starting to get into the line where we end the System Impact Study and the facility study. What we're trying to do here is to gauge whether the System Impact Study is necessary for our CEC approval, so if you could characterize my -- your answer in light of that, it would be most appreciated.

MR. SPITZKOFF: Certainly. I'll do my best. A System Impact Study will not address pole placement. That -- that is a much more detailed engineering point in time. It will identify at the substation the -- the bay -- if there's a bay available, the bay that it will connect into, or if an expansion of

the substation itself is needed, it will address that.

MEMBER FONTES: Would it -- would it adjust the route per se?

MR. SPITZKOFF: It will not.

MEMBER FONTES: Okay. So as you're completing the System Impact Study, the only thing we have to go on is where the actual point -- POI is, right?

MR. SPITZKOFF: Yeah, so the POI may play into what you feel is the best route. For instance, if you're coming into a substation, if your point of interconnection is on the west side of a substation, as opposed to an east side of a substation and there are geographical factors that are outside the switchyard, you know, knowing that your point of interconnection is on the west side, you know, that's a consideration you would take into account when designing what your final route is to approach the switchyard.

MEMBER FONTES: So there -- it could change from what the applicant proposes to what they get as the output of the System Impact Study?

MR. SPITZKOFF: I would say what I've come across in the past is if the CEC is being heard without a specific location identified within the switchyard, there's generally the -- the approach to the switchyard provides enough latitude to allow for multiple ways to

approach the yard. And this case has, you know, I don't remember the amount of acres, but, you know, it had a -- you know, it basically covered the APS-owned land, so as you get closer to the switchyard, you could, you know, it might be more practical to swing a little to the east or a little to the west.

MEMBER FONTES: Given the -- are you familiar with the project and the proximity to the SRP 500-kV and the other lines there?

MR. SPITZKOFF: Yes.

MEMBER FONTES: Okay. Given that, is that a SRP line or is that a Bureau of Reclamation 500-kV operated by SRP, do you know that?

MR. SPITZKOFF: To the best of my knowledge, it's a SRP line.

MEMBER FONTES: Okay. Could that make a determination of the adjustment of that due to the proximity of those lines?

MR. SPITZKOFF: So all of the existing lines do play into, you know, your determination of what the best route into the actual switchyard is.

MEMBER FONTES: Both horizontally and vertically, both height and width?

MR. SPITZKOFF: Yes.

MEMBER FONTES: Okay. So as we look at the

System Impact Study, the output of that is going to have some degree of variance, but not material variance where it would go outside; is that --

MR. SPITZKOFF: Yeah, I would --

MEMBER FONTES: -- a fair statement?

MR. SPITZKOFF: I would say that's a fair statement.

MEMBER FONTES: Thank you.

Mr. Chairman, nothing else.

CHMN STAFFORD: Please proceed.

BY MR. DERSTINE:

Q. Mr. Spitzkoff you've given the committee kind of a broad outline of the large generator interconnection process, is this -- are these APS's own rules and process or am I correct in understanding that what you have outlined is dictated by the large generator interconnection procedures adopted and promulgated by the Federal Energy Regulatory Commission?

A. (MR. SPITZKOFF) Yes, they're -- largely follow the FERC proforma. APS over the 20 years has filed a couple of deviations, our -- our application deposits are a little bit different than what the original proforma was. And even when you establish your cluster windows, in order to do that, you have to make a filing of FERC to establish the length and the actual timing.

Q. So you have to -- APS would have to or did make a filing at FERC for approval of anything that varies from the standard LGIP, but in, overall, it follows the standard procedures?

A. (MR. SPITZKOFF) Correct.

Q. Okay.

MEMBER LITTLE: Mr. Chairman?

CHMN STAFFORD: Yes, Member Little.

MEMBER LITTLE: I do have one more question, Mr. Spitzkoff. If -- if a window ends the end of September, the last day of September, what is generally the timing? I know these studies don't happen overnight, I've done enough of them, what is the timing before the results of the studies can be given to the applicants?

MR. SPITZKOFF: Certainly. And I think we were going to get into a little bit of that.

MEMBER LITTLE: Okay. That's fine.

BY MR. DERSTINE:

Q. Well, if you would like to cover that now in response to Member Little's question, go ahead.

A. (MR. SPITZKOFF) Sure. But I think, in leading up to that, you know, just providing an overview of the APS cluster or our existing queue, the magnitude. So right now we have 198 active interconnection requests

into the APS system. And that totals 75,127 megawatts. So that's a large number of megawatts. APS's system, we just this -- earlier this year, a few weeks ago, we hit a new system peak, so for reference our system peak is just over 8,000 megawatts. And as I just mentioned, the number of requests in our generator interconnection queue is 75,000 megawatts.

CHMN STAFFORD: Excuse me, but what did you say your peak load was?

MR. SPITZKOFF: It's just over 8,000.

CHMN STAFFORD: Okay.

MR. SPITZKOFF: So, generally, if you look across the country, from a non-RTO or ISO perspective, for a vertically integrated utility, APS has one of the largest interconnection queues in the country. And, as a matter of fact, we may be at the top when you look at it on a -- on a per megawatt interconnection request to load ratio.

CHMN STAFFORD: Yes, Member Drago.

MEMBER DRAGO: Yeah. If you could help baseline me before we go further, what you just described, how many clusters does that come up to?

MR. SPITZKOFF: Great -- great question. And I don't have the answer to how many clusters that -- that is.

MEMBER DRAGO: Okay.

MR. SPITZKOFF: If you give me one second, so right now we are studying, 2022, I'd say we probably have between six and seven clusters not actively -- we only actively have one in study, but you know, there will be five clusters waiting, you know, waiting in line now.

MEMBER DRAGO: Okay. And then my follow-up to that is when you're talking about the cluster you did earlier, is that just for the Cholla Substation?

MR. SPITZKOFF: So within our cluster windows, we subgroup those projects into geographical and electrical relevant areas. So the cluster for interconnections in the Cholla cover all requests between the Four Corners Substation, and anything into the lines into Cholla, and anything into the lines all the way down to Pinnacle Peak.

MEMBER DRAGO: Thank you.

MR. SPITZKOFF: So we have additional clusters for other parts of our system that are sub-broken out.

MEMBER DRAGO: Good. Thank you.

MEMBER LITTLE: Mr. Chairman?

MEMBER FONTES: Mr. Chairman?

CHMN STAFFORD: I have a quick -- I have a quick question first and then I'll -- then we'll go with

Member Little and then Member Fontes.

So approx- -- when you set these clusters up, are they based on total megawatts, are they based on number of projects? Do you consider where the projects are along the development when you create these clusters? Can you provide me a little more clarity on that, please?

MR. SPITZKOFF: Certainly. So the cluster's established purely on the date we receive an interconnection request. So if we receive a request within that window, they're in the cluster. The new process, we'll have a little bit of discussion, there's a new process being proposed with the new FERC order that changes that a little bit.

CHMN STAFFORD: That's a comment period right now for the rulemaking, isn't it?

MR. DERSTINE: That's correct.

CHMN STAFFORD: Okay. Go ahead.

MR. SPITZKOFF: Was there additional parts, I'm sorry?

CHMN STAFFORD: Yeah, so for the clusters, so right now you said it's based on timing of when they file the interconnection request?

MR. SPITZKOFF: Yup.

CHMN STAFFORD: And you say that may change in the future based on the pending FERC rulemaking. So

it's based -- you look at the -- in time and how is the cutoff determined? Is it a megawatt limit or is it just a certain number of individual projects? How do you calculate -- what goes into the size of the cluster?

MR. SPITZKOFF: The number of requests that we get within that window.

CHMN STAFFORD: Oh, there's a window?

MR. SPITZKOFF: There's no limit on how many requests that we cut off or the megawatt size. We're obli- -- as I said earlier, we cannot turn away a valid interconnection request and not study it, or study it in a different order. Right now we are operating under a first-come, first-served process.

CHMN STAFFORD: Okay. So -- but that -- the 75 gigawatts, is that what you said was in the queue?

MR. SPITZKOFF: Yes.

CHMN STAFFORD: Okay. So what's -- what's the current -- what's the current cluster you're studying, what's the size in, like, megawatts or gigawatts of -- of generation that's in that?

MR. SPITZKOFF: Sure. I don't know the answer of the size in the full cluster. I do know in the one we're studying for the Cholla relevant area, it's 2,000 megawatts.

CHMN STAFFORD: Okay.

MR. SPITZKOFF: But we have clusters going on in other parts of the system that have 2,000, 4,000, megawatts in those also.

CHMN STAFFORD: Okay. So just kind of bear with me, please. So the Cholla, there used to be four units operating there, it's down to two. So the closure of two of those freed up, I'm going to get -- I'm going to just, roughing it, like say -- because you said it's roughly a thousand megawatt plant at full capacity, half of it's gone, so it's roughly 500 megawatts of capacity there with approximately 500 more megawatts to go in 2025 when the remaining units are retired, and you're trying to look at 2,000 megawatts connecting in that same point, correct?

MR. SPITZKOFF: Correct. That's in the current cluster. We did have, you know, we have had prior clusters, for instance the cluster prior to the one we're currently studying was 4,000 megawatts.

CHMN STAFFORD: Okay. Now which -- now, is the Aurora project is that in the current or prior cluster?

MR. SPITZKOFF: That's in the current.

CHMN STAFFORD: Okay. Member Little, you had some questions?

MEMBER LITTLE: Yes, my question is just

kind of technical, how do you split that 2,000 megawatts, for example, amongst the buses when you're actually doing the study? Do you just split it up? Do you just lump it and inject it where?

MR. SPITZKOFF: Yeah, the location of where they're interconnecting is per the application.

MEMBER LITTLE: Oh, okay.

MR. SPITZKOFF: So -- so we can provide some guidance to an applicant on what they might be facing at a particular bus, but if that's where the applicant wants to interconnect, that's where we have to study it.

MEMBER LITTLE: Wonderful. Thank you.

CHMN STAFFORD: Member Fontes?

MEMBER FONTES: Thank you, Mr. Chairman. Can you hear me? I was muted by the host.

CHMN STAFFORD: We can hear you.

MEMBER FONTES: Question 1, what's the forecasted completion date of this current cluster that is at Cholla or do you have one?

MR. SPITZKOFF: Currently it's expected October 1st.

MEMBER FONTES: Of this year?

MR. SPITZKOFF: Yes, of 2023.

MEMBER FONTES: Oh, that's very informative

for this committee. So not too far off in the distant future. Second question, what's the future IRP demand? I know 8,000 megawatts is pretty impressive for a system peak load, but do you know off the top of your head what the future is looking in that IRP?

MR. SPITZKOFF: I -- I don't have those numbers on the top of my head.

MEMBER FONTES: Incremental, it's not going to be --

MR. SPITZKOFF: No, it's a couple of thousand megawatts over -- I mean, it depends on what time horizon you look at, but over the next 10 to 15 years --

MEMBER FONTES: Correct.

MR. SPITZKOFF: -- it's a couple of thousand megawatts.

MEMBER FONTES: Planning for growth. Okay.

And then at the Cholla Substation, that's -- that's a subcluster study, and you said there's 2,000 megawatts in the current, and then there was previously how many, 5,000.

MR. SPITZKOFF: 4,000.

MEMBER FONTES: 4,000. Were there any previous interconnect requests in past years that we should know about? So that's 6,000 total at that same

point.

MR. SPITZKOFF: I -- I would say there probably were. I did not go back and look that far. And if this would have been seven years ago, I could have told you every interconnection we had in our system, but when we're --

MEMBER FONTES: You were closer to the problem.

MR. SPITZKOFF: I was closer and we also -- we did not have 198 active requests, so I can't -- I can't quite do that anymore.

MEMBER FONTES: Have any of those, and where I'm going with this, have any of them had facility studies in terms -- and offtake contracts, to the best of your knowledge, and going forward?

MR. SPITZKOFF: So I know the ones in the previous cluster, to my knowledge, I believe one of those four projects has an offtaker. And they, all four of them, are in facility study and are nearing completion of their facility study.

MEMBER FONTES: So it's safe to assume that these projects are going to be constructing in advance of any outcome from this committee, and this -- for this project, so long as they've got the offtake and they go to construction?

MR. SPITZKOFF: I'm --

MEMBER FONTES: So those previous clusters, right, they're in facility studies and one of them has offtake?

MR. SPITZKOFF: Yes.

MEMBER FONTES: So it's safe to assume that the one who has the offtake is probably going to go to construction?

MR. SPITZKOFF: Yes.

MEMBER FONTES: And take up some of the real estate inside of the substation?

MR. SPITZKOFF: Yes.

MEMBER FONTES: And the other ones that are facility studies are probably closer to getting offtake, in terms of development?

MR. SPITZKOFF: Yeah, I need to correct myself. The one that we were talking about with the offtaker is not connecting directly into Cholla, it's connecting into the 345-kV lines that are leaving Cholla to the south. So it's not taking up an interconnection bay at Cholla itself. But it will take up, you know, capacity with it being online in the system.

MEMBER FONTES: So, again, we're trying to focus on as -- as this evolves through a System Impact Study, it may change a system impact facility placement

and impact the environment, as the purpose of our committee here, so those other projects are going to go in first, will those projects placements and facility studies be part of the outcome of this System Impact Study for this project?

MR. SPITZKOFF: Yeah, so this System Impact Study takes into account all prior interconnection requests that are still valid and in the process. So this current cluster study that we are performing for the 2,000 megawatts still has the assumption in that study of the 4,000 megawatts that were ahead of it and studied in the prior cluster.

MEMBER FONTES: Okay. So you'll have a better view of that at the end of the System Impact Study as it relates to this project; is that correct?

MR. SPITZKOFF: That is correct.

CHMN STAFFORD: I have a quick follow-up question there. So you're saying 4,000 for the prior study, that's when you look -- when you look at the current cluster study of 2,000 megawatts, does that -- does the current cluster study assume that 4,000 megawatts will be built?

MR. SPITZKOFF: Yes, it does. We do sensitivities. So the main study looks at the 4,000 megawatts is built. In this study, we are doing a

sensitivity if some or all of the previous 4,000 is not built, just so we have that information, because one of the factors is that 4,000 megawatt cluster that was -- that was ahead, there were approximately $2 billion of network upgrades identified to reliably interconnect 4,000 megawatts, as you can imagine. So in that instance, maybe not all of those will go forth, you know, to -- to spend that $2 billion.

CHMN STAFFORD: So do you do -- so on the current cluster, do you have some kind of contingency -- several different contingencies, assuming, like, the 4 -- I guess the main one is starting at the 4,000 gets built, the second -- and that's between four projects, right, you said?

MR. SPITZKOFF: Yes.

CHMN STAFFORD: And one of them has an offtaker, so if one assumes that will be built, the other three will not, and then there's -- do you have other ones like two of them get built, three of them get built, you can break it down that way to see what the impacts would be to the new cluster?

MR. SPITZKOFF: I -- we don't go that far, because the number of scenarios would just get out of hand. Because we also do different scenarios on where the output is being dispatched to. We do a scenario that

the output's going to California. We have scenarios of staying in Arizona. Sometimes it's -- we have scenarios it's going to the east. So you add those on top of the other sensitivities, we get into a pretty large matrix of how many studies that we're performing, so, you know, if we go to, you know, if one, two, three or all four are built, and you add those on top, it starts getting a little bit -- a little bit out of hand.

CHMN STAFFORD: Okay. So basically you look all or the one that's got the offtaker?

MR. SPITZKOFF: Yes. And there is a mechanism, if one of those earlier projects does drop out, and it wasn't a sensitivity that we studied and we already have the answer to, then we do -- we have to do a restudy to see what the effects are for any -- for all of the projects that were behind them.

CHMN STAFFORD: Right. Okay. So -- so I guess if all four projects for that 4,000 megawatts dropped out, that would significantly impact the current cluster, then?

MR. SPITZKOFF: It certainly would, yes.

CHMN STAFFORD: And, to your knowledge, at this point have any of those applicants in the prior cluster dropped out? They're all still actively pursuing interconnection?

MR. SPITZKOFF: Yes, they're all still actively pursuing interconnection.

CHMN STAFFORD: Okay. Now, in your past experience, what -- do you have an average percentage of what projects drop out after the System Impact Study, but before a facility study is -- is instituted?

MR. SPITZKOFF: Of that particular point, I do not. But, overall, we used to track just how many get to commercial operation, and it was approximately about 6 percent of the number of requests. That number has increased significantly in the last couple of years, I -- I -- I hesitate to say, but I think we're about 20 to 25 percent of interconnection requests that do get an interconnection agreement.

Now, we do have a lot of projects that have an interconnection agreement and have not yet constructed, so we'll wait to see if they actually get to commercial operation, but -- but there are a lot more projects now are getting all the way to the agreement stage and getting an interconnection agreement than there were just a number of years ago.

CHMN STAFFORD: Okay. All right. Thank you.

Member Fontes, did you have more questions? Sorry to interrupt you there.

MEMBER FONTES: I did.

Can you -- for clarification here, when do you determine a project's impact on systems reliability, grid safety, and overall benefit to Arizona, in terms of capacity, resource, adequacy, those sorts of things? At the end of the System Impact Study or when you sign the LGIA or what point is the professional opinion, you know, rendered, if you will?

MR. SPITZKOFF: The System Impact Study -- the end of the System Impact Study is when all impacts are known and network upgrades are identified that says this is what's needed to reliably interconnect the projects that were studied in this cluster. There are --

MEMBER FONTES: So at that -- go ahead.

MR. SPITZKOFF: Sorry. There are mechanisms, if -- if the assumptions that were studied end up changing, as we were talking before, if some of the earlier projects drop out and, you know, exit the interconnection process, there are mechanisms to restudy projects and do a restudy of System Impact Study, but the -- the normal timeline is the System Impact Study is the determination.

MEMBER FONTES: Okay. So at the end of the System Impact Study, we'll have a good idea of how that project is going to operate on the system in terms of

reliability, any potential impacts for safety, and then how it's going to benefit the overall resource adequacy, I'll call it, with respect to providing benefits to the power system?

MR. SPITZKOFF: Yes. We would from the safety and reliability aspect. I'm not sure the -- when you ask about the benefits to resource adequacy, that's a --

MEMBER FONTES: Yeah, I know, I'm using an inappropriate term here. But, I guess, the overall addition to the load --

MR. SPITZKOFF: Yes.

MEMBER FONTES: -- to keep it more generic.

MR. SPITZKOFF: Yes.

MEMBER FONTES: Thank you, Mr. Chairman.

CHMN STAFFORD: All right. I'm looking at the court reporter. Are you in need of a break or could we go for another -- break now?

THE REPORTER: We can go --

MEMBER LITTLE: Break.

THE REPORTER: Unless you want a break.

CHMN STAFFORD: Yes. Yeah, I'm hearing indications that a break is needed. So let's take a 10-minute recess and come back at 10:44. Make it 10:45.

We stand in recess.

(Recessed from 10:34 a.m. until 10:53 a.m.)

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

Members, have you finished asking questions? Were we ready for Mr. Derstine to continue with his direct?

MEMBER LITTLE: Mr. Chairman?

CHMN STAFFORD: Yes, Member Little.

MEMBER LITTLE: I still would like to know the answer to the question of how long it takes to do the studies after the end -- the close of a cluster period.

MR. SPITZKOFF: Certainly. So that varies, actually, unfortunately. There's no -- there's no clean answer, because one of the issues, if we look at this cluster as an example, the interconnection request was made in 2020, in March, I think it was March 26, 2020, so it was in the cluster window that closed March 31st of 2020. Those studies didn't even start until the studies of the projects prior to them were completed. And I don't have that -- that exact date on when it started, but I know a couple of years ago we did an estimate. When we actually start the studies, you know, there's a range -- sorry -- there's a range on how long studies will start, depending upon the number of requests within the cluster, the amount of megawatts, the location on our

system. The location's important because some areas are more congested than others, and we also have a lot of joint-owned projects. So projects with multiple owners in them, and -- and in that process, we have to get the review and agreeance of all of the joint owners, so that adds a little bit of time to some of the studies.

So circling back to the -- to the actual answer, the actual study time range, I'd say, is between 120 to 200 days, in that area. There have been -- have there been outliers? Yes, there have been, because, as I said, if you got some network issues that are extremely complex, it could take a lot of iterations to find what the upgrade is, and then even to get the buy-off of all the joint participants to agree that, yeah, we are okay with what the results show.

MEMBER LITTLE: Thank you. I do have one -- that brings me to one other question, actually, clarification. So the cluster that is being studied right now that this project is in, is not the cluster that ended March 31st, the most recent cluster, it's a cluster that ended way back in 2020?

MR. SPITZKOFF: Correct. Yes.

MEMBER LITTLE: Thank you.

MEMBER GOLD: Mr. Chairman?

CHMN STAFFORD: Yes, Member Gold.

Microphone, please.

MEMBER GOLD: Mr. Chairman, can you hear me now?

CHMN STAFFORD: Yes.

MEMBER GOLD: I have a question for Mr. Spitzkoff. You gave us a date of 1 October for this completion. Is that a hard date or a soft date?

MR. SPITZKOFF: That is a soft date. That is our estimate at the moment. But, you know, this is a complex area with, as you can imagine, there was the prior cluster added 4,000 megawatts. There were a lot of upgrades identified in that cluster, and now we're looking to add 2,000 megawatts on top of that, so the results are, you know, there's a lot of issues that we're trying to mitigate in this study. So right now October 1st is a soft date.

MEMBER GOLD: Now, you picked October 1st for a reason, what was your reason?

MR. SPITZKOFF: I think that date was picked based on our engineer's judgment at the time that we provided that estimate on how long we thought it was going to take, but -- and that was -- that was multiple weeks ago that that date was provided. And since then, we've, you know, we've been running the studies and seeing what the results have looked like, and they're

pretty complicated. So now, as we're getting closer to October 1st, and, you know, we're -- we're still trying to work through the results, the October 1st is -- is a little -- is a soft date at this -- at this moment.

MEMBER GOLD: So what is your -- I won't hold you to it, but what is your professional guesstimate of an actual date, sometime within how many days of October 1st?

MR. SPITZKOFF: I don't have --

MEMBER GOLD: Just a guesstimate.

MR. SPITZKOFF: I don't have that information, because I don't know what they're seeing in the actual study results themselves. I just know the high-level feedback when I asked the question, that there's a lot of mitigations to work through, and October 1st right now is a soft date, as I see it.

MEMBER GOLD: Who picked the October 1st date?

MR. SPITZKOFF: The APS engineer who is coordinating the studies from the internal perspective and with our consultants that are actually running the power flows themselves, he provides an estimate on -- on using his best judgment when he thinks we will be through, how long it would take.

MEMBER GOLD: Is there a possibility that

sometime during this meeting, during an intermission, you can contact that engineer and get his next best guesstimate?

MR. SPITZKOFF: I -- I don't think so. He would have -- I feel he would have given me that date if he had a better date. They also -- he also didn't say October 1st was not going to be met.

MEMBER GOLD: Say that again.

MR. SPITZKOFF: He also did not say October 1st was not going to be met. So right now that's the date we're going with. However, there's no -- we're not providing a guarantee that it's going to be October 1st.

MEMBER GOLD: But it's a good guesstimate.

MR. SPITZKOFF: Right now that's a good guesstimate, because at the end of the day the study is going to take as long as it takes to ensure that everything that's been identified is fully mitigated.

MEMBER GOLD: Again, back to my basic question, there's a lot of people here based on a date, and a date could be costly. So October 1st is the date we, as a committee, should shoot for to hear something, based on your engineer's statement to you within the past couple of weeks, correct assumption or am I saying something wrong?

MR. SPITZKOFF: I don't know if I want to provide a response to that.

MEMBER GOLD: Can you get a response to that, if not you, from somebody else?

MR. SPITZKOFF: Well, it sounds like it's a -- you're asking us for what is basically a guaranteed or a drop-dead date.

MEMBER GOLD: No, a best guesstimate.

MR. SPITZKOFF: I can -- if there's another break, I can make a call.

MEMBER GOLD: Thank you.

I yield, Mr. Chairman.

CHMN STAFFORD: Member Drago.

MEMBER DRAGO: Yeah, Mr. Spitzkoff, I've just got a question, when you talk about the mitigations that might be needed, what is your longest long-lead item in a mitigation situation?

MR. SPITZKOFF: I'd say right now that's extra high-voltage transformers. They're running about four years on a lead time.

MEMBER DRAGO: Thank you.

MEMBER LITTLE: Mr. Chairman?

CHMN STAFFORD: Oh, one moment, Member Little. Member Kryder had a question.

MEMBER KRYDER: Before you came to the

witness table, we spoke about three other projects that had been approved by the Line Siting Committee, and subsequently, I believe, by the Corporation Committee -- Commission, West Camp Wind 00206, Atlas Solar 00202, and Solar Pepper Power 00196. What's the status -- excuse me -- what's the status of those three projects now, do you happen to know?

MR. SPITZKOFF: I certainly know two of them. The third, the -- was it Aztec the one in the middle that you mentioned?

MEMBER KRYDER: Atlas Solar.

MR. SPITZKOFF: Atlas Solar. That's an interconnection request into another entity, and not onto the APS system, so I'm not familiar with the status of that project. But the West Camp Wind, they have -- to the best of my knowledge, they have a large generating interconnection agreement already, and I believe they're doing pre-engineering work in anticipation of construction.

I also believe they have an offtaker. On the Pepper -- Solar Pepper Power one, which if that's the one down by Saguaro that I'm remembering correctly, they also have their interconnection agreement, and I know -- I believe APS is -- we are doing engineering, and I believe we've started ordering long lead equipment.

And we may or may not have started actual construction work, like moving dirt or not. But that project is moving forward.

MEMBER KRYDER: Thank you very much. So in -- in at least two cases, that is, West Camp Wind and Solar Pepper Power, both of those got their impact study and they're underway?

MR. SPITZKOFF: Yeah, they got their impact study, they got their facility study, and they got their interconnection agreement.

MEMBER KRYDER: Thank you very much.

CHMN STAFFORD: Member Little.

MEMBER LITTLE: Mr. Spitzkoff, who is the consultant doing these studies? And do you usually use the same one or do you have several that you use?

MR. SPITZKOFF: We use several.

MEMBER LITTLE: That's good enough.

MR. SPITZKOFF: Okay. And I do want to correct, the West Camp Wind, now my memory is coming back to me, they don't -- I don't think they have an interconnection agreement. I believe they have a facility study or they're almost complete with their facility study agreement. But they -- they may have requested us to -- to perform engineering -- engineering and procurement activities, ahead of their

interconnection agreement.

An interconnection customer can request us to do that. It's at their risk that we would do that work. They would fund it in order to overlap the timelines while they're waiting for an interconnection agreement to be completed, they can request us to start the -- basically, the final engineering, and if there are long-lead equipment, they can ask us to -- to start procuring those.

MEMBER KRYDER: Thank you for the additional information.

CHMN STAFFORD: That was West Camp Wind you were speaking about?

MR. SPITZKOFF: Yes.

CHMN STAFFORD: That's the 206?

MR. SPITZKOFF: Yes.

CHMN STAFFORD: Okay. Have they selected what -- whether it would be 345- or 500-kV line they're going to build, because it's my understanding they can build one or the other, but not both, have they have made that selection yet or are they still waiting for results of studies to make that choice?

MR. SPITZKOFF: I know from our interconnection standpoint, they will be interconnecting into our 345-kV lines.

CHMN STAFFORD: Okay. So they've made the selection, then?

MR. SPITZKOFF: Their case was a little weird, and I don't want to say that it was -- it was -- it was one or the other. I just know, from where their project is interconnecting into our system, it's the 345-kV line.

CHMN STAFFORD: Okay. I'm just looking at the order that approved it, condition 21 states that, "The applicant shall select either the 345- or 500-kV interconnection authorized herein and shall make a filing in the Commission's docket control when the selection has been made."

I didn't see that in the docket, so I'm just curious. That's one of the things, you know, conditions can be imposed, but may not always be complied with. So I just wanted to make that -- make that point, because I'm looking at the order, and it says they should file it in the docket, and I looked at the docket and it's not there, but it appears they have made the 345-kV selection. I'm not saying you made that statement, I'm just -- from the information you provided, it appears -- that's how it appears to me, and I find that a little concerning.

BY MR. DERSTINE:

Q. Well, Mr. Spitzkoff, West Camp Wind had two separate queue positions, two separate interconnection requests, one was for the wires-to-wires connection, the 345, the other one was a 500-kV interconnection, as I understand it, or my recollection is at Cholla, they have continued to pursue both of those interconnection requests.

Do you know whether they have pursued the facilities study for the 500-kV line as well?

A. (MR. SPITZKOFF) I don't know that. And I don't know whether they are still pursuing the 500-kV interconnection request or if they have withdrawn that. I don't know. I can find that out.

Q. Can they continue to pursue both, at least through the LGIA process, up until a certain point in time?

A. (MR. SPITZKOFF) Yes, they can.

Q. And what is the point in time in which they would have to make a determination or select one of their interconnection options?

A. (MR. SPITZKOFF) Well, technically, they can pursue both and get interconnection agreements for both, as long as the study -- the study work treats them as two projects. If in their request for the second one, which would be the 500, if they predicated that upon the study

work not having the 345, then they would not be able to get an interconnection request for both projects at the same time, but I don't know if that has been done, they may be -- they're possibly looked at as two independent projects.

Q. Okay.

CHMN STAFFORD: Mr. Derstine, please continue with your direct.

MR. DERSTINE: Thank you.

Q. Mr. Spitzkoff, through my direct questions, as well as your colloquy with members of the committee, you've covered the large generator interconnection process, as dictated by FERC under its LGIA procedures, in the form of the Large Generator Interconnection Agreement; you've explained how the -- how the various queue or the cluster studies are performed, some of the intricacies with the cluster studies, and what's involved with that, and given some detail on this -- on the cluster study that relates to the interconnection request by Aurora Solar for the Obed Meadow gen-tie line project, and you indicated and gave some testimony about the high number of interconnection requests and the large load, the megawatts associated with those number of interconnection requests.

Is that a situation that is unique to APS or is

that something that is occurring across the country?

A. (MR. SPITZKOFF) It's occurring across the country, it's a -- it's a national issue.

Q. Okay. And you indicated, I think you touched on the fact, that FERC has recently made a final rule that is making its way through the legal process for becoming a finalized rule through the NOPR process.

What is driving, or do you have an understanding of what's driving the proposed rule change by FERC from the 2003 rule?

A. (MR. SPITZKOFF) Certainly. The -- I'd say the biggest driver is the backlog in the process. So nationally, I believe, the average is between four and five years that projects are spending within the interconnection process. That, combined with the uncertainties that when you're trying to study the volume of requests that come in, and the -- how the current process does not do a fair job of precluding speculative projects from requesting interconnection, what happens is you see a lot of projects withdraw their request, they might put in four requests at one time, knowing that their target is to get at least one project, but, you know, they -- they make multiple requests, and once they get one project, then they withdraw the other three requests.

And when you withdraw a request, especially if it's late in the process, you affect all of the other projects, because they now have to be restudied with the new information. So the volume of interconnection requests, both in just the number of requests and the megawatt amounts, are really not effectively addressed in what was the original FERC proforma. Then, you know, FERC did create Order 845, I think it was 2018, which tried to address some improvements.

It did help a little bit, it did not go far enough, especially the last couple of years. I don't know the stats offhand, but the volume of requests that are in queues around the country, I -- I believe it may have doubled in the last handful of years, and it's the largest amount of megawatts that has ever been in interconnection queues, so the -- those are really the big reasons for the need for the new reform.

Q. Okay. And how, just at a high level, how, to your understanding, would the proposed new rule change the process that you've described for the committee here today?

A. (MR. SPITZKOFF) Certainly. So as I described earlier, the existing process is a serial process, it's a first-come, first-serve process, and it provides an option for utilities to study projects, as we said, one

at a time. And it does provide the opportunity, if you want to cluster projects similar to how APS does it, but still that cluster is -- it's still a serial cluster what it's referred to is -- is -- it's when you're taking projects based on when they made the interconnection request.

And there are very few, I guess, barriers are the word for -- for people to make interconnection requests, and hence, a lot of speculative projects, so what they're -- part of the new rule is, first, it mandates now everyone is going to do a cluster study process. And it -- it mandates that the cluster window is now 45 days in length, once a year. So 45 days at some point within the year what utilities choose, that's when your request window is going to be open, and that's when you'll take interconnection requests. So that's the first thing they did.

The other thing, major reform is requiring a site control. So previously there was no requirement for an interconnection request to actually have site control for where their facility is -- is proposed to locate. You could pay a deposit in lieu of having site control. But what the new order has in it is a requirement for site control. And at the early stages, that requirement is 90 percent site control.

So of -- of the number of acres your project will need, say you're a solar farm and, you know, there's a megawatt-per-acre calculation, you know, for instance it's -- I'm making these numbers up -- but if it's 5 acres per megawatt for a solar array, and you're at a 100-megawatt request, you have to have 500 acres. But the early stage says you have to have 90 percent of site control. So 90 percent of 500 acres. And then as you get to the, I believe it's the facilities stage, then you have to have 100 percent of your site control.

Q. Okay. The -- I handed out to the members of the committee, and I think we've handed a copy to the court reporter, this is an article from Powermag.com, it's dated August 1, 2023, it bears the heading, "FERC Adopts Historic Reforms to Ease Nationwide Generation Interconnection Backlog," and it goes on to describe that the final rule is rooted in the 2003 order, but then makes a number of changes, as you've just touched on at a high level, to try to reduce the backlog of interconnection requests that not only is APS experiencing, but transmission providers across the country are experiencing. And I'll just read a short section of this where it indicates that the final rule references an April 2023 released research by Lawrence Berkeley National Laboratory would suggest that at the

end of 2022, and this is on page 2, my apologies, "More than 10,000 interconnection requests were active throughout the U.S., that represents more than 2,000 gigawatts of potential generation and storage capacity, 95 percent of which was solar, battery storage, and wind energy. In fact, the combined solar and wind capacity now actively seeking grid interconnection approximately 1.250 [sic] gigawatts approximately equals the installed capacity of the entire U.S. power plant fleet," according to the Berkeley lab report. And I'll read just a --

MEMBER LITTLE: Mr. Chairman?

CHMN STAFFORD: Member Little.

MEMBER LITTLE: Can I correct for the record, it's not 1.25 gigawatts, it's 1,250 gigawatts.

MR. DERSTINE: -- 250 gigawatts. A much bigger number, Member Little, thank you. I appreciate that.

Q. So in terms of what's driving the delays that this applicant is seeing and receiving its System Impact Study, and what other projects are -- the same delays that other projects are seeing is driven in -- I assume, in large measure, by just the large number of interconnection requests, and the high load associated with those projects that have to be analyzed through the -- through the System Impact Study process; is that

right?

A. (MR. SPITZKOFF) Yes.

Q. Okay. But there is a sentence here that I wanted to also read to you and ask for your feedback on.

MEMBER KRYDER: Which page?

MR. DERSTINE: Yeah, let me find it here. Were you able to track what I just read? Was that in the copies that you had received?

MEMBER KRYDER: Yes.

MR. DERSTINE: Okay. Other than the correction -- appropriate correction from Member Little?

Q. Okay. On page 4, and I'm reading starting at the second line from the top, "In addition to the drastic increase in the number of interconnection requests in all regions of the country, evidence shows that interconnection studies have increased in complexity since FERC issued Order 2003, potentially straining transmission provider resources." And --

CHMN STAFFORD: What page are you reading from again, Mr. Derstine.

MR. DERSTINE: Page 4 in my copy.

MS. BENALLY: Give us just a moment, Mr. Chair.

MR. DERSTINE: Maybe we had an issue in -- Well, can you give me the correct page number from what I

just read?

MR. HOFFBUHR: Mr. Derstine, it's on page 3, second paragraph.

MR. DERSTINE: Of the -- so -- can you direct us.

MR. HOFFBUHR: It's the second line of the second paragraph on page 3.

MEMBER KRYDER: "In addition," is that where you're starting?

MR. DERSTINE: I believe so, yes. It says, "In addition to the drastic increase in the number," did you find that? I apologize for the disconnect and apparently I'm reading from a copy that has different page numbers, but we're reading from the same sentence. Got it?

"In addition to the drastic increase in the number of interconnection requests in all regions of the country," everybody seeing that?

CHMN STAFFORD: Yes.

MR. DERSTINE: "Evidence shows that the interconnection studies have increased in complexity since FERC issued Order 2003, potentially straining transmission provider resources, it noted. At the same time we find the available transmission capacity has been largely or fully utilized in many regions creating

situations where interconnection customers face significant network upgrade cost assignments to interconnect their proposed generating facilities."

Did I read that all correctly?

CHMN STAFFORD: Yes.

MR. DERSTINE: Okay.

Q. So, Mr. Spitzkoff, is that also part of the time it takes to complete a System Impact Study, not only for the Obed Meadow gen-tie project, but for all interconnection requests is that you have the large number of projects that are in the queue, as well as the complexity of the analysis driven by, again, the number of projects, as well as the, like, potentially limitations on the transmission system or facilities that they're seeking to interconnect to?

A. (MR. SPITZKOFF) Yes, it's the number of interconnection requests and the gross megawatt amounts of those interconnection requests.

Q. Okay. So bringing that back to the cluster study for the Obed Meadow gen-tie project, is it -- is it true that these -- what I just read is -- explains, to a large degree, that is the large number and the complexity of interconnection requests is what's driving the current timing for the SIS for the Obed Meadow project?

A. (MR. SPITZKOFF) That's correct. You know,

given -- given the size of the cluster before them, and how long that study took, and until the study for their cluster could get underway.

Q. Okay. Is there any information you want to provide the committee, I mean, I think you received a number of questions about specifically this, the System Impact Study for Obed Meadow gen-tie project, I mean, you've been asked to try to either commit or, you know, give your best estimate about whether APS can -- can meet the October 1 release date for the System Impact Study. I think you've been careful to indicate that that's the -- your best information on when the System Impact Study will be provided for this project, but you've qualified it by indicating that, as has happened in the past with the prior projections for release of the SIS for Obed Meadow, that the October 1 date could slip; is that a fair statement?

A. (MR. SPITZKOFF) Yes, that is.

Q. Let's touch on, I guess, the issue that was raised by the applicant, and it's not necessarily, I guess I want to circle back and Mr. Hadley gave some testimony about how the interconnection or how APS will ensure that the interconnection of the Obed Meadow gen-tie project is safe and reliable.

Did you hear his testimony this morning?

A. (MR. SPITZKOFF) Yes, I did.
Q. Okay. I think he -- his testimony was essentially that Obed Meadow gen-tie will not interconnect at Cholla without APS ensuring and establishing that it is a safe and reliable interconnection; is that a true statement?
A. (MR. SPITZKOFF) Yes, it is.
Q. And how does that happen or what requires that under the large generator interconnection procedures?
A. (MR. SPITZKOFF) Certainly. So the procedures themselves provide a level of requirement as a -- as I said earlier, while we can't say no to any interconnection request, we do have the obligation to ensure that they interconnect in a reliable manner to the system, and not providing a negative impact.
And you couple that with a suite of NERC standards and NERC is the North American Electric Reliability Corporation, they're really the enforcement arm of FERC and reliability standards for the U.S., they have a suite of standards, and I'd say most relevant for generator interconnections is the standard FAC-002, which requires the study of any interconnection into your transmission system, be it a generator, another wire is what we call wires to wires, or -- or a large end user. Anything connecting to your transmission system needs to

have a reliability study performed, and that reliability study has to be done in coordination with the requester and any affected -- other affected systems. So that's one.

And then probably more specifically to the details of the System Impact Study is the standard TPL-001. I think it's up to -5, which is basically version 5.

Q. What is that? What is TPL?

A. "TPL" is shorthand for transmission planning. So the NERC standards all have a three letter code, FAC is shorthand for facilities; there's MOD, which is for modeling, so on and so forth. So TPL-001 is the main standard that requires all transmission utilities to perform a transmission assessment on an annual basis. And within that assessment, it prescribes the type of outages that you need to take, and they go all the way from, you know, all lines and service, everything being good, to multiple contingencies, you know, two lines going out at the same time, or even more. And at the same time, it also prescribes what the minimum system response is allowed to be for when a system has one of those outages.

So, for instance, if there's a single contingency, you're not supposed to drop load or

generation and all of your facilities need to be within their emergency rating and within their emergency voltage limits. So that's just an example of the -- there's a list of the minimum types of outages, and then what the minimum response of the system needs to be to -- to say that you have a -- you know, you have good reliability.

So when you combine those two in the System Impact Study, we mimic the TPL -- the -- what we study in the TPL assessments. So we do the N minus zero, the N minus one and some of the higher-order outages, and the measurements for reliability are based on the same criteria.

Q. So what I hear you saying is that this project nor any other project seeking to interconnect at facilities or transmission lines that are controlled and/or owned by APS will not be allowed to interconnect unless they meet those requirements?

A. (MR. SPITZKOFF) Yes, that is correct.

Q. And that is --

MEMBER FONTES: Clarification, please?

CHMN STAFFORD: Yes, Member Fontes.

MEMBER FONTES: That determination is not made until after the System Impact Study's completed; is that not correct?

MR. SPITZKOFF: That is basically the

System Impact Study, that is what it's doing.

MEMBER FONTES: Yeah, but -- so you couldn't impact -- or you couldn't determine if we had a line blow out and impacts on the environment until after that is complete or any kind of mitigations that we would need to plan for until the full -- until the full SIS is complete?

MR. SPITZKOFF: I might ask you to elaborate on that "environmental impact."

MEMBER FONTES: So if you have -- if you have an environmental impact as a result of an N minus 1 or N minus 2 contingency, that is a result of the System Impact Study, because the order of that is that the study is complete and then we would look at the mitigants; is that correct? Or do you have a list of mitigants as the output of the SIS?

MR. SPITZKOFF: There is a list of mitigations, but I'm -- I guess I'm struggling with I'm not sure what the environmental impact of an outage would be.

MEMBER FONTES: So let me rephrase or ask this in a different context. When APS has a rate-based generation project and you do your own LGIA and you do your own System Impact Study, when do you apply for the CEC?

MR. SPITZKOFF: That would be --
MEMBER FONTES: At the end of the System Impact Study or --
MR. SPITZKOFF: That would be a fact-based decision for each, it could be -- you could apply in many different stages.
MEMBER FONTES: Okay. In your experience on renewable energy projects, what -- what has APS done on ones that are rate-based?
MR. SPITZKOFF: I can't recall offhand a renewable energy project that APS has applied for a CEC that is applicable to a CEC, most of our projects are at a lower voltage. I guess the only one would be the proving grounds that we did just recently, and I believe the System Impact Study was complete for that project.
MEMBER FONTES: Before you applied for the CEC?
MR. SPITZKOFF: Yes.
MEMBER FONTES: Thank you.
BY MR. DERSTINE:
Q. Does the System Impact Study take into account any sort of analysis of environmental impacts of, say, the N minus 1 or other --
A. (MR. SPITZKOFF) It does not.
MEMBER FONTES: No, but it identifies

issues that could result in N minus 1 or N minus 2 to inform any kind of environment; is that correct?

MR. SPITZKOFF: I -- I don't believe --

MEMBER FONTES: It's a resource. It's going to identify issues that the project needs to plan for in terms of mitigations, the end result of the System Impact Study?

MR. SPITZKOFF: I would hesitate to say it would do that from an environmental impact --

MEMBER FONTES: No, not from an environmental -- again, strike the environmental -- what I'm looking for is you're identifying issues and risks that need to be mitigated as a result of the System Impact Study?

MR. SPITZKOFF: Yes, from a system reliability standpoint.

MEMBER FONTES: Okay. Thank you.

BY MR. DERSTINE:

Q. One of the issues that came up this morning or that I -- was raised concerns offtake agreements. Does your analysis under a System Impact Study of a cluster of projects take into account whether there's an offtake agreement or not?

A. (MR. SPITZKOFF) It does not. As a matter of fact, if a project has an offtake agreement, there

are -- they are under no obligation to inform of us of that at the -- at the time of the interconnection request.

MEMBER LITTLE: Mr. Chairman?

CHMN STAFFORD: Member Little.

MEMBER LITTLE: How do you model the load, then?

MR. SPITZKOFF: So under a generator interconnection request, there's no load addition modeled, it's -- you model a generator, and as I was saying before, our studies have different sensitivities, so if you're studying a sensitivity where that generation is going off to the west, then what you do is reduce generation off to the west, in either, for instance, at the Hassayampa Palo Verde hub or in California you would reduce generation.

MEMBER LITTLE: So you assume that it can be used?

MR. SPITZKOFF: Yes.

MEMBER LITTLE: Under whatever assumption you have as to the direction it's going, where it's going?

MR. SPITZKOFF: Yes.

MEMBER LITTLE: Okay. All right. That answers my question. Mr. Chairman, can I ask a couple of

questions that -- that -- to me it seems pretty clear that aside from this project we are looking at some issues that impact future operation of this committee, as far as timing goes with respect to CEC requests. And I'm curious, if the FERC proposed rule is passed, and this 45-day window for applications once a year is -- is implemented, do you have any idea how long it would take APS to get caught up if you're just now studying applications that came in in 2020?

MR. SPITZKOFF: So there is a transition process that's part of the rule, and I'm only on page 700 of the 1,480 of the order. So I've -- I've read through the transition process once. I'm not going to try to replicate what it says that process should be.

MEMBER LITTLE: Okay.

MR. SPITZKOFF: But there's -- but there is a process --

MEMBER LITTLE: For getting --

MR. SPITZKOFF: -- to catch up, yes.

MEMBER LITTLE: Okay. That's good. And my other question has to do with the biennial transmission assessment. There are studies that are done in support of the biennial transmission assessment reliability and power flow studies, and it is -- I believe that Staff has, at least in the past, made the assumption that the

projects that were included in those studies were current and up to date. It's beginning to sound like they aren't.

Is that, for example, this -- the Obed Meadow project probably was not included in the studies that were done for the BTA; is that correct?

MR. SPITZKOFF: That's correct. But in the BTA, I would not say that Staff is, in their analysis, is -- I'm really determining, making a determination on the reliability of projects, like Obed Meadow, who they may have filed a 10-year plan, but there's no -- there's no facilities associated with that 10-year plan yet. So they -- in the BTA, Staff relies on the studies that the utilities have performed.

MEMBER LITTLE: Right.

MR. SPITZKOFF: And those studies inform the reliability of the grid. Now, those studies will have projects included in the modeling that are past the certain point of their interconnection process, you know, if they have an interconnection agreement, if they have a PPA, et cetera, because their upgrades are known, and we know that they're likely to build and go to commercial operation.

When the BTA assessment comes out, my recollection is not -- it's not seen statements just for

all interconnection projects that happen to have filed a 10-year plan on saying yes, we agree these are reliable or not.

MEMBER LITTLE: That's true. However, I think that in the past if a major project, back in the days when there were six interconnection agreements per year, and planning was much -- the planning window was much longer, generally speaking, I think those projects were included in the studies.

This is a different world. And I guess what I'm trying to establish is what the probability is that any of these projects that are coming in for CECs similar to this one. I really don't want to pick on you guys, because you've done an outstanding job in the work that you've done, but that those projects will have been included in the studies that were done in support of the BTA?

MR. SPITZKOFF: Yeah, so I'll just add that while they may not have been included in the -- this last BTA, and they might not be included in the current BTA that's ongoing, at a point when they are going to move forward, they will be included in the models and evaluated and as -- you know, I would hope, as my earlier testimony moments ago demonstrated, that the interconnection process ensures generators are connected

to the system in a safe and reliable manner.

MEMBER LITTLE: Thank you.

MEMBER KRYDER: Mr. Chairman?

CHMN STAFFORD: Member Kryder.

MEMBER KRYDER: Back a couple of minutes, you talked about the upcoming or likely revision of the FERC rule. When do you see that coming into actual play, because I think that's pertinent to the transition plan and all 1,400 pages?

MR. SPITZKOFF: Certainly. So there's a whole lot of legal machinery that happens when a FERC rule comes out, there's a -- the rule itself has a clock in it, I believe it's 90 days, again, that timeline was not in the first 700 pages, but I think I heard it was -- it was 90 days for public transmission providers to make their compliance filings with FERC, which those compliance filings tell FERC here's how we've changed our OATT, our Open Access Transmission Tariff, to comply with your order, that 90 days, assuming it is 90 days, starts, I believe it's the day the order is published on the federal register, something like that.

MEMBER KRYDER: And put -- put some calendar around that, what -- what are you looking at, two days, two years?

MR. SPITZKOFF: Looking at in terms of?

MEMBER KRYDER: Publication of the rule.

MR. SPITZKOFF: I'm not an expert. I would just say generally it's just a matter of weeks, so it's possible that it's already been published, and if it hasn't been, it would most likely be published within the next handful of -- of weeks for sure.

MEMBER KRYDER: Okay. So let's just grab a date, an arbitrary and made-up date, but we'll say September 30, it's published. Then Obed Meadow would fall into the transition package and all 1,400 pages that you talked about, and so instead of a likely firm decision on part of your company, it now falls back into the transition package.

MR. SPITZKOFF: Okay. So if we -- if we play out a timeline and if we say September 1st is when the 90-day clock starts, that means by -- I believe that would be generally the end of the year, APS would have to have made its compliance filing, and basically start the transition process.

Now, the -- from -- from what I read, the transition process has two pieces, and it depends on where the existing projects are in their process. So if those existing projects have signed a facility study agreement, then there's a facility study transition. And, for all intents and purposes, they continue on to

what the existing process is today, and frankly, once you get past the System Impact Study, the process is a whole lot more efficient and quicker. But if a project does not have their facility study agreement yet, then they go into a system impact cluster transition study in some form or fashion.

So the question is it does come down to calendar, and if APS does complete their System Impact Study by October 1st, it would be before the transition process starts. So they would likely be within the facility study stage of their project by the time that transition starts.

MEMBER KRYDER: Thank you very much. That's very helpful.

MR. DERSTINE: And, Mr. Chairman, committee members, if -- to just clarify Mr. Spitzkoff's testimony on when the new rule will become effective, it will become -- Order Number 2023 will become effective 60 days after it has been published in the federal register. It has not yet been published -- not yet been published. Transmission providers, compliance filings will be due 90 days after the final rules publication date. And then the NOPR has a 180-day compliance period, so that's the, I think the transition period that Mr. Spitzkoff --

MEMBER KRYDER: So it has not been

published and nobody can guess, in my experience, when things get published in the federal register, that's a pretty black box in my experience?

MR. DERSTINE: Bit of a moving target at this point.

MEMBER KRYDER: Thank you again.

MR. DERSTINE: Yes.

Mr. Chairman, members of the committee, I don't have any further direct testimony to elicit from Mr. Spitzkoff. We wanted to be here today. We understood that the committee had questions about the System Impact Study for the Obed Meadow gen-tie project and the time that it's taken to get to a System Impact Study or how much time it will take to get to a System Impact Study, and to provide the answer to your questions around that. And then we wanted to, at least to the extent we can, address questions regarding the reliability considerations in terms of the interconnection process.

And so, you know, we certainly, APS doesn't have a stake or, you know, a position on the issuance or the timing of the issuance of the CEC, but we wanted to be responsive to your questions and to give you the best information we could to assist the committee in your decision-making process.

CHMN STAFFORD: Thank you, Mr. Derstine, the committee appreciates that.

MEMBER LITTLE: Mr. Chairman?

CHMN STAFFORD: Yes, Member Little.

MEMBER LITTLE: I would like to thank APS very much for coming today, taking the time to outline for us the process, and what is necessary, that was all kind of a vague thing for us. And I think it's important and it was very, very helpful.

Also, I would like, sort of in line with the questions that I asked before, in general, can I ask the applicant what the impact would be for an applicant, not this one, because we're quite a ways into this one, but what would be the impact of waiting to come in for a CEC -- for applying for a CEC, waiting until later in the planning process for a project?

And, Mr. Derstine and Mr. Crockett, you guys have both a lot of experience in this area.

MR. DERSTINE: Yeah, I'll just quickly answer that I don't think I'm in a position to answer that, and I don't think APS is either. I think it depends on each particular project, and probably commercial and business considerations that are unique to each project. Sometimes there's financing considerations. You know, access to capital, et cetera,

that may be tied to obtaining various permits, including the CEC, but I think that's a -- certainly a better -- a question better answered by this applicant, at least in terms of this project and maybe about other projects which they've had experience with.

MEMBER FONTES: Mr. Chairman, Member Little, may I rephrase that in a slightly different context?

CHMN STAFFORD: Yes, Member Fontes.

MEMBER FONTES: When a project is put out for competitive tender for the award of an offtake by APS under a PPA, call it 15, 20 years, is there any advantage to a developer when they do have the CEC in that evaluation of their bid proposal that could be motivating a developer that APS, typically or generally, I know each RFP is different, would have in there that would motivate a developer to want the CEC in a -- in a -- I don't want to say assertive, not aggressive, but assertive manner like this, knowing that they don't have a System Impact Study so they could be positing for a competitive advantage against the other, you know, offers that you could characterize for us?

I know you need to be careful on that because you're representing both -- both sides, but could you characterize that just so we have an appreciation of

the committee?

MR. DERSTINE: Well, I -- Mr. Chairman, Member Fontes, I would answer it this way: That, in my experience, given the need for resources that both renewable, as well as firm generation resources that are facing companies' utilities, like APS, and other utilities throughout the Southwest, that it is not uncommon in a Power Purchase Agreement or other offtake agreements, tolling agreements, to have timing requirements, that may include a requirement that the counter party have the CEC and obtain the necessary permits by a certain deadline, so that they can meet commercial operation date. So I think it is not uncommon for project developers and I'll certainly turn it over to -- to this applicant, but project developers to be pushed and be required to meet a commercial operation date, and that is certainly going to be dependent on obtaining a CEC.

MEMBER FONTES: But that's typically done post-award, as the way you've characterized it; is that correct? I was looking at it pre-award, when they're still bidding for a RFP, is there -- is there a requirement, typically, on an APS open tender, open solicitation that they have the CEC or do they do that after they get the PPA award?

MR. DERSTINE: Yeah, I don't know that I can -- I'm not in a position to answer that specific question. But I think it's a consideration that a developer of a storage project or a renewable project would take into account, and that is the requirements for when the project needs to go online to satisfy the offtaker. And oftentimes the offtaker has a need for these generation resources, certainly sooner rather than later, and they are pushing for early operation and commissioning dates.

MEMBER FONTES: And in this case we have no commercial offtake or we have no line of site that they're even bidding on anything, so I just want to note that.

MR. DERSTINE: And, again, I don't want to, you know, Mr. Crockett or his client may have an entirely different answer than the one I gave, and so I would, you know, ask them to please weigh in.

CHMN STAFFORD: Yes, please, Mr. Crockett.

MR. CROCKETT: Chairman Stafford, Member Fontes, let me -- let me answer the question by turning to my client, either Mr. Hoffbuhr or Mr. Hadley.

Would you -- would you please describe your understanding of the, generally, the request for proposal that APS has solicited with regard to the, you know,

Northern Arizona, the Cholla Power Plant area.

MR. HOFFBUHR: Yes, sure.

Chairman Stafford, I'll touch also a little bit on timing, you know, and how we schedule and why we're here today without a System Impact Study. As a developer, you know, first step is obviously identifying a potential site, you know, that makes sense in this case adjacent to Cholla, which has a scheduled retirement -- fully scheduled retirement date of 2025.

When we first started acquiring the land for that project, that's -- that's why we were near Cholla, for a 2025 COD. So after securing site control there's obviously a lot of boxes you need to check to advance the development of a project, including, as I mentioned, securing leases, filing interconnection requests, identifying the required permits to complete the project, in this case Navajo County Special Use Permit and the CEC. And then timing that with APS RFPs. And in trying to develop and have a -- as complete of a project as possible when these RFPs are released.

So as I mentioned, we -- we established site control in 2019 and immediately followed that with an interconnection request into APS with what we assumed would be a roughly six-month turnaround time and, you know, we've heard today why there are delays, and that

makes sense, but as a developer we're trying to plan, we can only go off the information we're given. So as we move forward we did all of our environmental surveying work and went through the County permitting process, which we completed last year. And had originally planned to come in front of the CE- -- in front of your Line Siting Committee last year and decided to hold off just a little bit to wait for the System Impact Study.

At the beginning of this year, we were hearing that the Line Siting Committee was booking out to 2025, which we've now, you know, we've had conversations about that, and felt with a System Impact Study due date of, at the time April 1st, that with this hearing date that we would have a complete System Impact Study, and be prepared to move forward here today.

So -- and in response, you know, as far as the offtake goes, you know, we don't know exactly when APS is going to issue RFPs, but we know that it's generally once a year, and so, you know, all of these kind of things come together when we're trying to bid a -- we know we're going to have potentially an opportunity to bid this project, the retirement of Cholla in '25, and we feel we have a very competitive project, so we're just trying to check those last few boxes to have a complete project to make it as competitive as we

can in the RFP.

MR. HADLEY: And, Chairman Stafford, if I may add, being one of the support groups for development projects, we typically look across the board and see what we can accomplish as quickly as possible. There's lots of moving parts. In the context of a CEC, we worked with Mr. Crockett, looked at the statute, and felt that we met the requirements to obtain a CEC.

Especially given the fact that the SIS is a very early assessment in the interconnection process. I think, as Mr. Spitzkoff elaborated, that there are many potential changes to the study end results after moving past the SIS into the facility study. So we did not necessarily feel that an SIS was the 100 percent picture anyhow of the interconnection impact.

CHMN STAFFORD: Thank you.

MR. CROCKETT: And if I could just follow up quickly.

Mr. Hoffbuhr, you mentioned the site control, just for the record to be clear, where -- where is Aurora Solar with regard to site control, and I guess I'm asking what percent site control do you have both of the solar plant location and also the proposed gen-tie route?

MR. HOFFBUHR: We've had 100 percent site

control since 2019.

MR. CROCKETT: So is it safe to say that Aurora Solar and its parent, Avangrid Renewables, is committed to this project and has done a substantial amount of work and spent a substantial amount of money to get to the point where we are today?

MR. HOFFBUHR: Yes, that is true.

MEMBER FONTES: Clarification. Do you have a lease with an option to buy or did you buy the property in terms of demonstrating sufficient site control? Just so we know.

MR. HOFFBUHR: I'm not -- I -- in this specific case, we have a lease option, not a lease option to buy. So we are --

MEMBER FONTES: So you have a lease option that you could walk away and expire if you didn't get this, as opposed to buying the property for site control?

MR. HOFFBUHR: That's correct. Yes.

MEMBER FONTES: Thank you.

MR. HOFFBUHR: So we have a -- we have a -- we're in a development lease option period now, which we've extended because of some of the delays, and once we exercise that lease option, we will move into a -- the official lease term for the operational period of the project.

MEMBER FONTES: So if the project's abandoned, the lease option's just written off, as opposed to property that's purchased that you have to actually divest on a transaction sale?

MR. HOFFBUHR: That's correct.

MEMBER FONTES: Thank you.

CHMN STAFFORD: What's the deadline to exercise your lease option?

MR. HOFFBUHR: Currently? I just had to extend it from 2025 to 2028 on the lease option.

CHMN STAFFORD: Okay. Thank you.

MR. CROCKETT: And, Chairman Stafford, that's -- that's really all I would have to add to the questions that are before us. I do have some, at the appropriate time, some questions for Mr. Spitzkoff.

CHMN STAFFORD: Yes, we had not gotten yet to your cross-examination. It is almost noon. I'm looking to the members, would we want to resume this after a lunch break or do we prefer just to soldier on?

MEMBER KRYDER: I think we should bring -- Mr. Chairman, given the fact that we don't know how long this cross would be, I suspect it would be timely to break now and then pick up after lunch with Mr. Spitzkoff.

CHMN STAFFORD: Mr. Crockett's cross.

Mr. Derstine, what -- are there any constraints on your witness's time today.

MR. DERSTINE: No, I don't believe so, we've -- we -- we're appearing here today, and I think we're available this afternoon.

CHMN STAFFORD: All right. Thank you.

All right. With that, I believe that we should take a lunch break, and we will come back to resume with Mr. Crockett's cross-examination.

Yes, Mr. Derstine?

MR. DERSTINE: That's perfectly acceptable. As a housekeeping item, I wanted to move the article that I referenced in my examination of Mr. Spitzkoff, that's the Powermag.com article, dated August 1, 2023, that was marked as APS-1.

CHMN STAFFORD: Quick question on that. Do you have a URL for this or is it behind a pay wall?

MR. DERSTINE: It is not behind a pay wall. I can find the URL and provide it.

CHMN STAFFORD: All right. Thank you. If you could just -- I will admit the exhibit, if you just supplement with the URL so it would be easier for others to find it that didn't receive a physical copy.

MR. DERSTINE: Okay. I can -- should I e-mail that to Mr. Brewer or how do you want me to

provide it?

CHMN STAFFORD: Yes, please provide it to Mr. Brewer and the court reporter.

MR. DERSTINE: Will do.

CHMN STAFFORD: Like I said, APS-1 is admitted.

(Exhibits APS-1 was admitted into evidence.)

CHMN STAFFORD: With that, we will take a recess, and we will come back at, I want to say 1:00, but given our track record of returning on time, if we have -- let's say --

MR. CROCKETT: Chairman Stafford, I'm always an optimist, and I'm hoping that we get to a point where we're reviewing a CEC this afternoon, so I want to make sure that we have sufficient time. If it's possible we'll -- we'll be ready to come back at 1:00, if the committee is.

CHMN STAFFORD: Okay. Yes, let's take a recess until 1:00, acknowledging the fact that it may be more like 1:15 by the time we get everybody actually in here and start and get back on the record.

So with that, we stand in recess.

(Recessed from 12:01 p.m. until 1:03 p.m.)

CHMN STAFFORD: Let's go back on the

record.

I believe we left off, Mr. Crockett, you were about to begin your cross-examination of APS's witness.

MR. CROCKETT: Yes, Chairman Stafford. I might hand the mic over to Mr. Derstine to give you an update on an item that came up over the lunch hour.

MR. DERSTINE: Yeah, when Mr. --

CHMN STAFFORD: Speak into the mic, please.

MR. DERSTINE: Oh, got it all bent up. How's that?

CHMN STAFFORD: Much better. Thank you.

MR. DERSTINE: Thank you, Mr. Crockett. I think that Mr. Spitzkoff was asked to at least make a call or calls to confirm on the timing for the System Impact Study for -- for this project. He did do that, and we'll ask him if he's received any new or different information in terms of when the SIS is expected to be completed and released.

MR. SPITZKOFF: Certainly. So my team's actually had their regularly scheduled meeting this morning, reviewing all of the projects, and identified an updated date of March 1st, 2024, for the expected delivery of the studies.

BY MR. DERSTINE:

Q. And, Mr. Spitzkoff, were you given any reason for the push-out to March 1st?

A. (MR. SPITZKOFF) Yeah, the reason is really the complexity of the mitigations. 2,000 megawatts is basically the equivalent of two new 500-kV lines, and those lines would have to go, you know, they would have to span hundreds of miles, you know, the -- the cluster before this one identified two new 500-kV lines that were required for the 4,000 megawatts, plus a handful of other additions.

With those mitigations in place, and now adding 2,000 megawatts, in addition to that first 4,000 megawatts, we need additional new 500-kV lines to be able to deliver that power either towards the Phoenix area or over to the west, and the planning of new 500-kV lines, that would be hundreds of miles in length, is quite a significant undertaking.

Q. So this -- this project does not involve a 500-kV gen-tie, but the 500 -- new 500-kV facilities are relevant for this cluster anyway?

A. (MR. SPITZKOFF) Yes, because it's the impacts to the system, so 500-kV lines are the largest ones that we have in the system that carry the most power, so if you're looking to be able to accommodate generation on the order of thousands of megawatts, your upgrades are

likely going to be at the higher voltages, 500-kV or 345-kV, maybe.

Q. Okay. So it's the analysis, the ongoing analysis of the mitigation required for the facilities that are being added through this cluster that is driving the delays and pushing out the release date to October 2024 --

MR. CROCKETT: March.

MR. DERSTINE: March. Got it. Okay. October was the prior date, we're now into March. Got it.

Q. Anything else you wanted to add on that?

A. (MR. SPITZKOFF) Nope.

MEMBER KRYDER: Mr. Chairman?

CHMN STAFFORD: Member Kryder.

MEMBER KRYDER: Just to build off of your comments, Mr. Spitzkoff, does that piece of information play into your March 1st date that you gave us a few moments ago?

MR. SPITZKOFF: I'm sorry, does what?

MEMBER KRYDER: The two 500 lines that you're talking about, and the complexity of them, was that all played into this new date that you gave us a moment ago?

MR. SPITZKOFF: Yes, that's why it's

extended out.

MEMBER KRYDER: Okay.

MR. SPITZKOFF: Is to identify feasible options for new 500-kV lines. We -- we can put new 500-kV lines just in the computer models and run a couple of different scenarios and so, yeah, that looks like it works, but it might not be feasible actually in real life. So what we try to do with our studies is identify mitigations that can actually be accomplished instead of just fictional mitigations.

MEMBER KRYDER: Thank you very much, that's understood that you would do that. I -- my question really was had that been played into the new date that you gave us?

MR. SPITZKOFF: Yes.

MEMBER KRYDER: Thank you very much.

CHMN STAFFORD: So the mitigations that's going to be required is two additional 500-kV lines?

MR. SPITZKOFF: That's what it looks like.

CHMN STAFFORD: For the current cluster we're talking about?

MR. SPITZKOFF: Yes, the current cluster that's under study that the applicant's project is being studied with it.

CHMN STAFFORD: Okay. So does that mean

that of the -- how many projects -- how many different projects are in this current cluster? You said it was like 200 megawatts, but is that --

MR. SPITZKOFF: It was three or four projects.

CHMN STAFFORD: So those three or four projects would have to pay to construct two 500-kV lines before they could build their projects?

MR. SPITZKOFF: That is correct, if all of them go. Now, when those results are delivered to the customers, if -- they will be -- the cost of those will be allocated based on a cost causation, you know, impact ratio, so some projects might have more of the cost than others, and if of those four projects in that cluster if some of them drop out, then we go back and study again at a lower megawatt level, and maybe one or two network upgrades drop off, reduces the cost a little bit, so that -- you go through a couple of iterations of that sometimes when you have an interconnection study that results in what will likely be billions of dollars of upgrades.

CHMN STAFFORD: It sounds like the applicants are almost in a game of chicken with each other.

MR. SPITZKOFF: That's the process and a

bit of how it works at the moment, yes, unfortunate.

MEMBER FONTES: Mr. Chairman, I have a question related to that, if I may, maybe a cultural reference?

CHMN STAFFORD: Yes, Member Fontes.

MEMBER FONTES: Mr. Spitzer [sic], is there any of the projects been awarded already contracts in this cluster that -- that you're referring to?

MR. SPITZKOFF: I have no knowledge of any of -- any of the projects and whether they have a PPA or a purchaser.

MEMBER FONTES: Yup, okay. Thank you. That's -- that's kind of --

The second question I had is you said that there could be significant mitigants if all of the -- the projects are a go, is that -- in the cluster, but does that extend to the substation too? Obviously, we're focused on the potential upgrades and how that can affect the environment. So I'm looking at the substation there, specific within the cluster study. Do you see the upgrades there, potentially?

MR. SPITZKOFF: It's -- it's possible the substation might need expansion.

MEMBER FONTES: If you've got 500-kV lines going through there, it's possible?

MR. SPITZKOFF: So the 500-kV yard may need expansion. The 230 yard, which is where this project's interconnection point is, I believe has some available bays. But for the 500 yard, depending on where those new 500 lines are located, and they don't -- those new 500 lines don't necessarily have to come out of Cholla.

MEMBER FONTES: Yeah.

MR. SPITZKOFF: You know, it could be reinforcements needed in other parts of the system downstream, so I -- it's possible, but I can't tell you.

MEMBER FONTES: It's a little premature to say the impact of the 240 -- the smaller side of the substation, based upon the needs of the larger?

MR. SPITZKOFF: That's correct. But, you know, APS does have, you know, some -- you know, some good footprint, you know, the switchyards at Cholla are in the same property perimeter as the generating plant, so, you know, there is -- we have -- we have a good amount of land in the area.

MEMBER FONTES: Last question here on that, because we've got NERC, obviously, that we're guaranteeing are looking at things, and one thing that I asked you about, it's a little outrageous, if you had additional 500-kV lines on there, would that inform where the placement of the pole structures for the conductor on

the 345-kV would, based on either NERC standards or operational requirements for APS that you guys have?

MR. SPITZKOFF: Yes, everything would be looked at together, if the -- if the new upgrades are coming out of Cholla and are basically coming out to the south, you know, in the south or southeast direction, you know, it would impact the location of the new lines and a potential tie line, but, you know, I think that's one of the reasons why the applicant provided a sort of a broad, I think it was 147-acre corridor for the area as it approaches the Cholla switchyard.

So my speculation at this point is all of that would be able to be accommodated within that -- that broader -- broader corridor.

MEMBER FONTES: There's two applications here, there's a CEC-1 and a CEC-2. What I was focused on is inside the substation, because real estate gets a little tighter. So I'm just thinking that, you know, you're going to make that determination in the facility studies if you have a couple of 500-kVs on the final pole placement there.

So if we're looking at impacts and mitigations there, we would -- you know, the timing of that would be more appropriate once you have a clear view on whether those 500-kVs are going to go in or not. Is

that --

MR. SPITZKOFF: Yeah, it would be the facility study that would have, you know, a more detailed view at that time, but, you know, I -- I would say the expectation is, you know, the area around the substation is covered in CEC-2, which is the area with that broader requested corridor, and, you know, though all of those should be able to be accommodated within the identified corridor.

And I guess the process is if -- if something comes up where it cannot be, then the applicant or APS, if it's been turned over to APS at that time, you know, would have to submit an amendment to the CEC for a change in the corridor.

MEMBER FONTES: Thank you.

CHMN STAFFORD: Follow-up question. So the two 500-kV lines that you say that it's indicating that would be the mitigation required, that assumes that the 4,000 megawatts in the prior cluster all get built?

MR. SPITZKOFF: Correct.

CHMN STAFFORD: So what's the time frame for any of those projects to drop out and then change what the resulting mitigation requirements would be for this cluster?

MR. SPITZKOFF: Yeah, that time frame is

quite extensive, so they're nearing their facility study now, so if we -- if we just say in the next 30 days they'll get their facility study, the process is then we provide them a draft interconnection agreement, then there's generally a 60-day time period where you're negotiating the interconnection agreement. They sign the interconnection agreement, that goes into effect. And in the FERC process projects have the right to suspend their project for up to three years.

CHMN STAFFORD: That's for large connections, the smaller ones don't have that, do they?

MR. SPITZKOFF: Correct, they do not. And all of these are under the large interconnection process.

CHMN STAFFORD: And the "large" is defined as, what, 100 megawatts or more?

MR. SPITZKOFF: 20 megawatts or larger.

CHMN STAFFORD: 20 megawatts or more?

MR. SPITZKOFF: Yeah.

CHMN STAFFORD: I had a different concept of what large was. All right. That's my question.

Now, Mr. Crockett, are you prepared to make your cross-examination?

MR. CROCKETT: Yes, I am. Thank you, Chairman.

//

C R O S S - E X A M I N A T I O N

BY MR. CROCKETT:

Q. Mr. Spitzkoff, good afternoon.

A. (MR. SPITZKOFF) Good afternoon.

Q. And let me just say out of the gate, thank you for coming up to this hearing on less than 24 hours' notice, it's appreciated.

The applicant here, Aurora Solar, has submitted a request to APS for interconnection; is that correct?

A. (MR. SPITZKOFF) Yes.

Q. Has Aurora fully complied with the interconnection request process?

A. (MR. SPITZKOFF) Excuse me. Yes, they have. And, if I might add, I can answer your first question because the applicant has self-disclosed their identification. Typically in the FERC process, the company's name and other details are confidential, and we just refer to them as the queue number that they are. I just want to get that on the record.

Q. Okay. And I won't ask you for a queue number for them, but you can confirm that they have requested interconnection?

A. (MR. SPITZKOFF) Yes.

Q. And, to your knowledge, they've fully complied with that part of the process?

A. (MR. SPITZKOFF) Yes.
Q. And is there anything, to your knowledge, that APS is waiting on from Aurora Solar as part of the interconnection process?
A. (MR. SPITZKOFF) No.
Q. Okay. I wanted -- while I'm thinking about it, I wanted to follow up on one thing that came up earlier today and that's the West Lake CEC, was it West Lake?
A. (MR. SPITZKOFF) West Camp.
Q. West Camp, there we go. And there were two options that were approved in the CECs. I had -- I had received earlier today a communication from the attorney representing the West Camp entity who indicated that there had not been a final decision made on which of those two options they were selecting. Do you have any information that would contradict that information?
A. (MR. SPITZKOFF) I do not.
Q. And, Mr. Spitzkoff, are you familiar with the line siting process?
A. (MR. SPITZKOFF) Generally familiar, yes.
Q. Just take a moment and describe how you're generally familiar with the process.
A. (MR. SPITZKOFF) I've been a witness in maybe 10 or so siting cases at this point. I've participated, either as a witness or a support to a witness in cases

for, I would say, going on close to 20 years at this point. And one of the teams that reports to me is our siting -- siting team, whose job it is is to perform the siting process, oversee the environmental studies, the public outreach, put together the applications, and make the application requests.

Q. Are you generally familiar with the statutes in ARS Title 40, Sections 360.01, going forward?

A. (MR. SPITZKOFF) I'm familiar with them in the broad sense. I couldn't tell you, you know, A, B, C, D, but in the broad sense I know -- I'm familiar with what the requirements are.

Q. And I'm going to ask you a few questions about that, and I'm not asking you to express any kind of a legal opinion, I'm just asking you to express your opinion as someone who's been around this process in Arizona for, I think you testified about 20 years.

Are -- are you aware whether -- you're aware of ARS 40-360.06, which identifies the factors that are to be considered by this committee in approving or denying a certificate of environmental compatibility?

A. (MR. SPITZKOFF) Yes.

Q. Okay. And have you had an occasion to review that statute recently?

A. (MR. SPITZKOFF) From time to time.

Q. Okay. And is it your understanding that one of the factors that the Line Siting Committee considers is whether or not a System Impact Study has been completed for a particular applicant?

A. (MR. SPITZKOFF) Well, so -- so I think your question is a little confusing. You asked whether the Line Siting Committee considers that. I've -- that has been brought up in past hearings. I don't believe it's enumerated in the statute, though.

Q. What is your -- what is your opinion on the Line Siting Committee's role in evaluating a System Impact Study?

MR. DERSTINE: I'm going to object to the form.

Mr. Spitzkoff, you're free to answer it, to the extent you can.

CHMN STAFFORD: I guess I will sustain your objection.

If you could please rephrase the question, Mr. Crockett.

MR. CROCKETT: Yeah.

Q. So, well, Mr. Spitzkoff, do you believe that the Line Siting Committee has a role in determining whether or not an interconnection is safe and reliable?

MR. DERSTINE: Same objection. But I think

the witness can answer, based on his understanding of the federal interconnection procedures that he's testified to this morning, and to the extent he has an opinion about whether the -- this committee has a role, in addition to the large generator interconnection procedures, I think he can -- you can answer it, if you can.

CHMN STAFFORD: I'll sustain that -- I think -- Mr. Crockett, are you trying -- I guess it seems like you're asking for a legal conclusion. Are you asking -- can you, in terms of whether or not he -- I guess it's his opinion of whether or not this committee has a role or has a -- or that has a place in its evaluation.

MR. CROCKETT: Well, okay. So let me -- let me try a different question.

Q. Do you have an understanding of what the purpose is of the line siting rules -- statutes and rules?

A. (MR. SPITZKOFF) Yes.

Q. What's your understanding of the purpose of the line siting process in Arizona?

A. (MR. SPITZKOFF) I would say to review the environmental impacts of the construction of new facilities, 115-kV or higher or 100 megawatts for thermal plants. The, you know -- the environmental impacts generally being visual, noise, effect on land use, those

sorts of factors.

Q. And what -- what is the -- what is the relevance, in your opinion, of the System Impact Study in the objectives the Line Siting Committee has in evaluating a line siting application?

MR. DERSTINE: I'll object to the form. Maybe counsel can rephrase it as, you know, more of an open-ended question in terms of whether Mr. Spitzkoff has an opinion of whether it does have a role or not.

CHMN STAFFORD: Sustained.

Mr. Crockett, it seems like you're asking him to give his opinion on whether or not that reliability is a relevant factor for this committee to consider, I don't -- as a fact witness and a subject matter expert on transmission interconnection, I don't think he's prepared to answer that question.

MR. CROCKETT: Okay. Well, let me -- let me ask a theoretical question of him. Let me try one more time.

Q. So, Mr. Spitzkoff, how -- how would the results of a System Impact Study affect a line siting case?

A. (MR. SPITZKOFF) I would say there would be little to no impact, a System Impact Study does not consider environmental factors at all. It's a study to determine the reliability impact to the transmission

system.

Q. So does the -- does APS consider, in performing a System Impact Study, a certificate of environmental compatibility that may be issued for a project?

A. (MR. SPITZKOFF) No, that plays no role in the System Impact Study.

Q. Does that come -- does that come up in the facilities study?

A. (MR. SPITZKOFF) It does not come up in any part of generator interconnection process from the FERC process of getting an interconnection agreement.

Q. Okay. And would it be your -- do you know whether the -- the impact of a System Impact Study on this process would be, for example, that you determine that a line can't come into a facility from a particular direction and the line has to be moved, and then that might implicate environmental studies on a new area, as opposed to the one that was included in the application?

A. (MR. SPITZKOFF) So that's a possibility, and if -- if a requested corridor is narrow, you know, the System Impact Studies could identify, you know, the direction a line comes into a sub could, you know, affect the best way to do that, you know, very particular routing, so if you have a narrow corridor that has been requested, you know, there could be some concern of going

outside of that corridor, which generally is why if you haven't done pre-studies or know the specific factors on the ground, you -- and the applicant will request as wide a corridor as reasonable to allow for, you know, the variation of a couple of hundred feet to the one way or another.

Q. And would you agree that's what the applicant has done in this case?

A. (MR. SPITZKOFF) I would agree.

Q. At least with respect to proposed CEC number 2?

A. (MR. SPITZKOFF) Yes.

Q. If -- does -- does APS or its consultants that are performing a System Impact Study ever conclude that a particular application could never be safely or reliably interconnected to the grid?

A. (MR. SPITZKOFF) No, that is not one of the allowed outcomes in the FERC process, the answer is always you can connect, but here's what you have to do to mitigate the impacts. There's no answer that is no, you cannot connect.

CHMN STAFFORD: But let me interject here, but the answer is it's going to cost you $2 billion more than you have in your budget to build this project, so that's what it's going to take, so I guess they don't tell them they can't, they just put prices on it that

effectively eliminate them from being able to comply with that, correct?

MR. SPITZKOFF: Yes.

CHMN STAFFORD: Okay. Thank you.

Please proceed, Mr. Crockett.

BY MR. CROCKETT:

Q. And, Mr. Spitzkoff, you don't know how any particular applicant will respond to your conclusions regarding mitigations that may be required to build a project; is that right?

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

Q. And in your experience, have applicants gone forward with projects when there's been mitigations that are required?

A. (MR. SPITZKOFF) Yes, for sure.

Q. Is that unusual or is that common?

A. (MR. SPITZKOFF) It's common. Especially in the last couple of years, there's -- there's typically mitigations required, given how large our queue is and how many projects have already been studied.

Q. And you haven't put a price tag on the cost of the mitigations that may be required, based on the System Impact Study for the current cluster?

A. (MR. SPITZKOFF) No, we have not.

Q. If the Line Siting Committee were to approve the

CECs that are requested by Aurora Solar, is there a chance that Aurora Solar could interconnect its project to the APS grid in a way that raises either reliability concerns or safety concerns?

A. (MR. SPITZKOFF) No, there is not.

Q. And please explain why that's not a possibility.

A. (MR. SPITZKOFF) I believe my earlier testimony, you know, covered that, the -- the studies that we perform are to identify, you know, any potential adverse impact. I mean, I guess being an engineer I can't -- I try not to talk in absolutes, so it's painful right now, but generally the answer is no.

Q. And talking for a moment now about the new target date for completing a System Impact Study for this cluster, is that March 1, 2024, date a firm date?

A. (MR. SPITZKOFF) Nothing's a firm date until the study's actually delivered.

Q. So that March 1st date could slip also; is that true?

A. (MR. SPITZKOFF) It's certainly possible.

CHMN STAFFORD: But you would never be able to interconnect, the applicant would never be able to interconnect until that study was completed and additional steps beyond that before they could actually connect to the grid?

MR. SPITZKOFF: Correct. You have to have an interconnection agreement in order to connect to the grid. And just to expand on that if it -- I don't know if it provides any value, but theoretically if an applicant builds their whole project and builds a gen-tie, any applicant not just this one, APS, if they're connecting into APS, we're the ones that make that final connection, so we -- you know, we have that gate key of, you know, someone can't just go out there and build something and connect to our system without our approval on that.

CHMN STAFFORD: Right.

BY MR. CROCKETT:

Q. And with respect to the execution of a large generator interconnection agreement, does the existence of an offtaker contract, a PPA and a LGIA, does that necessarily mean that project will move forward?

A. (MR. SPITZKOFF) No, it does not.

CHMN STAFFORD: Do they ever move forward without one? Are any of these projects built as like a true merchant plant that plans to sell on the open market without a PPA?

MR. SPITZKOFF: I believe there have been and with APS being right on the border of California ISO, the ISO is generally a market, and you don't necessarily

have a specific PPA. You don't have to have a specific PPA, so --

CHMN STAFFORD: Theoretically, they could just get into the EIM, couldn't they, and dispatch that way?

MR. SPITZKOFF: Yes.

CHMN STAFFORD: Without any kind of PPA?

MR. SPITZKOFF: Yes, they could.

CHMN STAFFORD: Okay. Wanted to clarify, thank you.

Sorry to keep interrupting Mr. Crockett, please proceed.

MR. CROCKETT: Thank you, Chairman.

Q. So, Mr. Spitzkoff, if you would now I would like to look at the proposed CEC corr- -- or the proposed corridor for CEC number 2, and probably the easiest way to do that is to look at the back side of the placemat that you have in front of you.

Do you have that?

A. (MR. SPITZKOFF) I do.

Q. So when we're looking at this exhibit, which is, I'll just get the exact -- it is Exhibit OM-7B, for the record, but it's on the back of the placemat, so the APS substation, the Cholla Substation, is highlighted there in the dark gray on this map. You may not know the

answer to that?

A. (MR. SPITZKOFF) That's what it appears to be.

Q. Okay. All right. Well, if you'll -- if you'll assume, for the purpose of these discussions, that that's -- that's the case, and the corridor that's being proposed around that substation is in kind of the medium gray on this map.

Do you see that?

A. (MR. SPITZKOFF) I do.

Q. And does that corridor provide for some flexibility in terms of finding a path from the Obed Meadow Solar Project into the Cholla Substation?

A. (MR. SPITZKOFF) To the best of my knowledge today, I -- I feel that's a -- you know, an adequate request at this time.

Q. Given where we are in the SIS process?

A. (MR. SPITZKOFF) Yes.

Q. Do you believe that requesting a corridor like this reduces the -- the likelihood that the SIS could produce results that necessitate a change to the CEC?

A. (MR. SPITZKOFF) Can you start that question again, I'm sorry?

Q. Yeah, it was a long and -- long question.

I'm just wondering, by proposing this larger corridor around the substation site, does that reduce the

chance that the System Impact Study would require either APS or Aurora Solar to come back to the Commission for a modification of the CEC?

A. (MR. SPITZKOFF) Yeah, I would say it definitely reduces the probability.

Q. And would you elaborate on why you believe that's the case?

A. (MR. SPITZKOFF) Just given the expanse of the request.

Q. Am I right in assuming that that just gives the applicant more options of getting in and these options have already been studied as part of the environmental studies that support the application in this case?

A. (MR. SPITZKOFF) Not sure what you mean by "the options," I don't think a specific option has been identified on the dark gray.

Q. Right. I mean, I guess it's an infinite set of options at this point because we don't have the System Impact, but this typically would provide a substantial amount of room for the applicant to work with APS to find a path into the Cholla Substation, would you agree?

A. (MR. SPITZKOFF) Yeah, I would say it provides ample opportunities to find routes in.

Q. And I guess where I was trying to go earlier with this, and I wasn't very successful, but to the

extent that the SIS identified an issue which necessitated that somehow we had to access this substation in a different way, expand potentially the Cholla Substation, that would potentially implicate new environmental studies associated with a new -- a new corridor or a new route; is that right?

A. (MR. SPITZKOFF) It could.

Q. And that -- and that would implicate this process here?

A. (MR. SPITZKOFF) It could.

Q. But if the applicant ends up routing the gen-tie within this corridor, if it's ultimately approved by the Line Siting Committee, is it likely that the results of the System Impact Study would change that -- that -- that outcome?

A. (MR. SPITZKOFF) I would characterize that as a low probability.

MR. CROCKETT: I think that's all I have. Thank you, Mr. Spitzkoff.

CHMN STAFFORD: Mr. Derstine, any redirect?

MR. DERSTINE: Nothing. Thank you.

CHMN STAFFORD: Any questions from members?

(No response.)

CHMN SPITZKOFF: Mr. Spitzkoff, it appears that you're free to go.

MR. SPITZKOFF: Thank you.

MEMBER GOLD: Thank you very much.

CHMN STAFFORD: Thank you for coming to testify for the committee today. I appreciate it.

All right. Members, I guess so it now falls to us to decide what our course of action should be to proceed. I think this testimony has been very helpful to us in getting perspective on how this System Impact Study and the interconnection process with the utilities works or doesn't work, depending on the case. I'd like to hear from my fellow members what -- how they care to proceed with this, if they wish to -- if they wish to proceed today with examining the CEC or some other option perhaps. We've heard a lot of testimony today and I think, myself, personally, would prefer not to vote on the CECs today.

I would like to review the transcript and the record, and I think perhaps maybe we should add additional language to the CECs to clarify how this is working, because the old way of assuming that we have a System Impact Study for Staff to evaluate prior to issuance of the CEC, that doesn't seem like it's going to be possible in the vast majority of these cases, for certainly anybody who is going to connect to the APS system.

MEMBER LITTLE: Mr. Chairman?

CHMN STAFFORD: Yes, Member Little.

MEMBER LITTLE: I agree with you. I think that -- I have always had concern when there was not a System Impact Study for Staff to review, both when I was on the Staff side and when I began working here. I think it's in the record that the cases that have been sited where the CEC was issued and there was not a SIS, or the System Impact Studies had not been provided, I voiced my concern at that time.

However, I also recognize that we -- I'm not sure that I personally know where the line should be drawn with the responsibilities of this committee. I think that knowing -- having assurance from technical people who have done the studies and looked at the studies is important in my representing the public or important to my representing the public in siting.

The gen-ties are all we have authority over with these -- this new type of generation that's coming in, and I think that it -- that we should be looking at that. However, I also recognize that perhaps there -- there is a line there. And we also, in addition to all of that, need to consider what we've heard today, which is that there are some real problems with utility planning. The way that, you know, the way the system has

evolved, and we need to work out something that works for the committee, the Commission, and the applicants and the utilities, if the utility is not the applicant. And I think it -- I think it deserves a little more consideration.

CHMN STAFFORD: Well, we have the option to have the applicant file a brief to explain, you know, why it's met its burden, point to the evidence in the record and show why the system -- to argue why and explain why the System Impact Study is not required to be completed before issuance of a CEC, other than the fact that it's happened three times in the past.

MEMBER MERCER: Mr. Chairman?

CHMN STAFFORD: Yes, Member Mercer.

MEMBER MERCER: I'm in agreement with you and Member Little. Being fairly new in this -- in this committee and not having the expertise that Member Little has or Member Fontes, just listening to the witness, I understand, you know, the cost that the applicant has already incurred, and we have been going back and forth, is it going to cost them any more money? Is it going to impact their application? Right now I'm -- I'm just sitting here and it's, like, it's not for me to decide whether it's going to -- to impact them in either a financial or in a more detrimental way that the project

is not going to be approved and I'm not ready to vote on -- on it.

CHMN STAFFORD: All right. Well, pursuant to AAC R14-3-213(b), it says, "Upon request of the majority of the committee, the parties to the certification proceeding may be requested to file briefs with the committee." So that's -- we can get a motion.

MEMBER FONTES: Mr. Chairman?

CHMN STAFFORD: Yes, Member Fontes.

MEMBER FONTES: Thank you, I appreciate the opportunity here. You made a comment at the -- your introductory comments with respect to, you know, the Corporation Commission's view on this on whether we have to have hard technical inputs to inform the CEC. My personal opinion is yes. I would say that the rule possibly, you know, from your authority up to the full commission, we've got this FERC/no FERC that Mr. Crockett and the gentleman from APS, the attorney, artfully described and that's described in the Power Magazine.

I think in light of that, it's timely to revisit the sequencing link so that we can possibly inform developers and also utilities on what -- what, you know, our role here and how that serves as a meaningful and timely input to our evaluation, so that we can make a determination on CECs in the future with respect to where

the -- whether the SIS is required or not going forward. So that's one thing I wanted to observe for you.

The second thing is I think this is a good project for Avangrid, and thank you, Mr. Crockett, for all your testimony, it's very useful, but when I look at this in examining what should be, you know, a gray area or remain silent in a lot of the statutes, I look for precedent, and one of the precedents I looked for was the question I asked APS, what do you do with your own projects? And if they're siting a recent project within the last 24 months where they waited to have a System Impact Study in order to move forward with its CEC application, I would look at that as precedent.

Second is, you know, there's a lot of other projects coming in here. We don't know what those variables are as part of the cluster. Those other commercial projects that were referenced, we don't even know what those attributes are within the clusters that they were studying. Maybe they were a lot more straightforward, maybe they weren't, but we don't have information to advise on that.

I will point out that all those projects did have commercial offtakes, so they were a lot further along the lines than what Member Mercer referred to as the investment that the developer made. So here we don't

see a parallel to that, in terms of how far are they.

And, lastly, the applicant hasn't applied for a RFP. There's no open bid right now. So if we wait until we're better informed until March, that doesn't really hold the applicant up on what I heard in the testimony.

CHMN STAFFORD: We can't wait until March to act, Member Fontes. The deadline for this committee to act on this application is December 20th of 2023.

MEMBER FONTES: I understand. I defer back to you on that. So I don't have an answer for that, or I'm just observing as it relates to why we have some unknowns, if you will, and it's hard for us to make an informed decision on the CEC at this time, so thank you.

CHMN STAFFORD: Thank you, Member Fontes.

MEMBER FRENCH: Mr. Chairman?

CHMN STAFFORD: Yes, Mr. French -- Member French.

MEMBER FRENCH: Yes, I've heard a fair amount of comments and testimony reflecting on the factors to be considered in the issuance of the CEC by the committee, and I just wanted to point out in 360.06, specifically paragraphs 7 and 8, and possibly maybe even have someone read those into the record and have a little bit of discussion amongst the committee members on what

the verbiage of those two paragraphs are and what they mean for us.

CHMN STAFFORD: Are you speaking about ARS 40-360.06(a)? Is that the statute you're referring to?

MEMBER FRENCH: Yes.

CHMN STAFFORD: I think you're referring to -- I think you meant to say 7, "The technical practicability of achieving the proposed objective and previous experience, equipment, and methods available for achieving a proposed objective," and then number 8 is --

MEMBER FRENCH: Yes, that's what I'm referring to.

CHMN STAFFORD: And then number 8 has to do with the estimated costs of the facilities when compared to the costs, as proposed by the applicant as compared to the cost with additional conditions imposed by the committee. And then number 9 is the additional factors that require consideration under applicable federal and state laws pertaining to any such site. So can I --

MR. CROCKETT: Chairman Stafford, before you ask for a motion just could I make a couple of comments here?

CHMN STAFFORD: Certainly, Mr. Crockett.

MR. CROCKETT: First of all, I'd like to at some point hear from you how you see the process working

if we were to submit a brief. I mean, if we would come back before this committee at an open meeting, for example, a Line Siting Committee open meeting, I'd like to understand how you see that process working.

And then the other comment, I guess, I do have concerns that by not moving forward on this application that it will have an impact. My understanding is there may be some other projects coming on your hearing calendar in the near future where there are not System Impact Studies. And I -- and I wonder, given the deadline for acting on the application being in December, we still won't have a System Impact Study in December. You won't have any more information then than you do now. We can maybe brief the legal issues. We've talked around that today that some of the cases I've submitted, we can do a deeper dive on that, some of the line siting cases I've talked about, but I'm not sure that things will look much different in a month or two or three from now, and we can't wait until March, and -- and March isn't even a firm date, and I do worry about the chilling effect this will have on other applications and projects if -- if these cases can't move through the Line Siting Committee, so I just wanted to put those comments out there.

CHMN STAFFORD: Thank you, Mr. Crockett. I

appreciate your concerns.

The way I would envision it working would be the same way it would work for the hearings before the hearing officer. The hearing would take place, the record would be closed, the party would file a brief, and then at a subsequent time within the time frame set by the statute, the matter would be set on an agenda before the committee to meet, like an open meeting at the Commission does, and then they would vote on however many items on the agenda. The hearing officer -- the hearing officer case, this case, whatever -- whatever cases hadn't been voted on at the conclusion of the hearing, because under the statute, we have still, I think I pointed out several times, until December 20th of this year to act on this application.

So the tradition of the committee, though, is to set it where we vote at the conclusion of the hearing. Typically these hearings would have been done yesterday morning. But because of this issue and the confusion and the concerns about the lack of a System Impact Study, I think it's appropriate for this matter to be briefed, the record will be closed today, and the subject will be briefed. And then I'd issue probably a procedural order or the agenda for setting the committee open meeting to consider the CECs and vote on them at

that.

After we've all had a chance to review the transcripts, there's a lot of information there. I haven't had a chance to fully digest the article that was provided. I found another article about -- that talked about these FERC rule changes. I understand there's going to be some penalties involved for failing to meet the deadline to complete the System Impact Study under the Order 22 -- 2023 [sic].

So I think, and this is the first case that I've been chair where there hasn't been a System Impact Study. So I think we need to, as the committee, kind of figure out the course forward. And I think I would like to have a CEC that has additional language in it addressing this issue soundly for the Commission to vote on, and if they approve, then we'll know what's going to happen going forward in these types of cases, clearly.

MR. CROCKETT: And, Chairman Stafford, is there is a schedule yet for Line Siting Committee open meetings in maybe September or October or November?

CHMN STAFFORD: It would be -- I believe the first one it could be potentially in September. It will depend on -- because right now as it stands we only have one hearing currently set before the hearing officer, to achieve the kind of scale it would make sense

to have the open meeting address more than one item. So certainly we could set this matter to where the briefs could be filed, we could be -- we could have read them, reviewed the transcript, and be prepared to vote at that meeting, at that open meeting that would address, because we're going to have to do that for the hearing officer matter, because it doesn't require a quorum of the committee or it could just be a hearing officer to have the hearing, but it takes the majority to issue the CEC.

So my thought -- yeah, my thought is that when we're going -- going forward, we're going to start having meetings for the committee to consider multiple items. This could be set on with that one. And then going forward, I think after this case the committee will have a handle on this and won't have a -- will know what -- what to do and how things should proceed in situations like this going forward.

MR. CROCKETT: And, Chairman Stafford, if I could impose upon you to ask you a couple more questions. Do you envision that -- you'd mentioned that you would like to see some additional language, would you be looking for the applicant to propose that, or would the members of the committee propose, for example, like amendments that we see in items that come before the Arizona Corporation Commission, recommended orders, is

that how you see this working?

CHMN STAFFORD: I think either way would be appropriate, I mean, if you wanted to propose language in your brief, you're certainly welcome to do so. My -- and if the -- my fellow members are free to try to come up with any kind of language that they think, they wouldn't have to file a formal amendment like the Commission does, but certainly as we go through the provisions, they could suggest language, you know, if they have it handy in a written-out form, it could certainly aid the discussion, I think, than ad libbing it live.

MR. CROCKETT: Yeah, sure.

CHMN STAFFORD: So I think -- and I certainly -- when I reviewed the brief, I certainly intended to analyze it and I think I would myself try to come up with some kind of language that would address my concerns, and then share it with the committee to see if that also assuages their fears or concerns, I'd say.

MR. CROCKETT: Given the broader application, potentially, of this case, would you allow other interested parties to file AMICUS briefs in the docket on this?

CHMN STAFFORD: I don't know if I'm going to open it that much, but I'll certainly allow APS to file a brief, if they so chose to detail. I think that

that would be particularly helpful if APS did, because it's your connection queue which is the most heavily burdened by this, with 75 gigawatts -- 75 gigawatts of projects in your queue, I mean --

MEMBER FONTES: Mr. Chairman?

CHMN STAFFORD: Yes, Member Fontes.

MEMBER FONTES: I'd extend that to all Arizona-based ACC utilities, all utilities, because TEP, UniSource, SRP, have got the same issues.

CHMN STAFFORD: Members, do you have a preference on that?

MEMBER MERCER: I agree. I think it's a good idea to include other utilities to comment and, you know, help with this issue because it needs to be resolved.

CHMN STAFFORD: Yeah. Okay. I agree, I think it would be appropriate to allow --

MEMBER FONTES: I think --

THE REPORTER: I'm sorry. Hold on.

CHMN STAFFORD: One at a time, please.

I think -- I think I've changed my mind. I think we should open it up. We should let any -- any utility or applicant who appears before this committee to file a brief to address this issue. And I think -- because I think it would help, you know, especially for

this committee if we could -- if we tee this issue up, and then address it ourselves and hand that off to the Commission and they can definitively address it and so that would set the policy going forward, for example, if we had certain -- we want to have new findings of facts and conclusions of law conditions that are included in every -- in every CEC where the System Impact Study has not yet been completed, separate and apart from ones that have.

And I think we can -- I think we need to kind of look at that holistically as a whole between all these things because this is a problem that will continue to assert itself, unless this whole new FERC rule change significantly improves the situation, but again, I'm not holding my breath on that, I'm hoping it will make probably incremental progress, but it's not going to -- it's not going to change the way this whole -- everything works. I mean, there's still -- you're going to have multiple projects competing for a limited number of spaces to interconnect.

And it's going to, you know, it's just going to keep happening over and over again until we take care of it and address it and have a plan and a consistent approach going forward.

MR. CROCKETT: So, Chairman Stafford --

MEMBER GOLD: Mr. Chairman?

CHMN STAFFORD: Yes, Member Gold.

MEMBER GOLD: Just a comment, again, new member. Right now this committee is being reactive, what you're suggesting we make changes so in the future, we and every other committee like us, can be proactive. How quickly can something like this be accomplished?

CHMN STAFFORD: I think it will depend -- I'm going to assume everything goes according to Hoyle here and that the parties file briefs, they adequately articulate the problem, and how we can approach it, the importance of the System Impact Study and its role in this Commission's decision-making process and that so when we move forward, we'll be confident that -- because we'll issue the CEC, assuming that everything -- and then that gets approved by the Commission, if the language that we've added addresses this and kind of going forward, and they approve that, you know, they could even include in the order that, yes, this is what we do for System Impact Studies that are not completed prior to CEC, and that would kind of set the policy for the Commission, the committee going forward.

And so this -- so in future hearings when they come in here without a System Impact Study, we don't repeat this process every time, and we don't have some

kind of confusion or concerns we need to get those -- I think it would be helpful for everybody in the entire -- anybody who has had to site or plan a line in this state to have a course forward that the committee and the Commission have blessed, and that's what -- how we would proceed.

And I think this -- this case, you know, apparently there's been three other cases where they've issued CECs without a System Impact Study, but again, I wasn't the chair then and so I think we should address this head on and get it resolved and so it would be clear what's expected from applicants going forward.

MEMBER FONTES: Mr. Chairman, just an observation for the record, as you consider that. There is a number of transmission lines, high voltage, 500-kV and above is what I'm thinking about, that will transverse Arizona that will not have an interconnect, that will still be subject here, and interconnect into CAISO or the Southwest Power Pool, California Independent Systems Operator is CAISO. And those are subject to the Western Electric Coordination Council path rate, so that's very -- it's different, but it's a wires-to-wires path evaluation that's a very similar process to the interconnect that we know and that is the topic here that leads to the System Impact Study.

So as we look at having interested parties comment on that, I might suggest not only interconnect, but any kind of path rating that would be subject to inform this committee in the language that is -- is drafted up in that. Hope that's helpful.

CHMN STAFFORD: Yeah, I appreciate your concern, but I think that we should --

MEMBER FONTES: The Atlas Solar --

CHMN STAFFORD: -- confine it to the -- confine it to the facts of this case, because that's not an issue in this case. The issue is whether the System Impact Study was completed, when it's going to be completed, and apparently now it's not even possible for it to be completed before the deadline for this committee to act passes, because my original hope was that we would get a firm commitment that we would have a System Impact Study by October 1st and then by October 15th we'd have Staff's evaluation. That would give us plenty of time to vote on the CEC with that information before us.

Now, today, we've have heard from APS that is impossible. I'm getting a signal. I think --

THE REPORTER: I'm fine.

CHMN STAFFORD: Okay. Okay. I thought we were going to take a break here for a second. Okay. But yeah, I think that -- I got distracted.

MR. DERSTINE: Mr. Chairman, members of the committee, I think it -- your idea is a good one to open it up to other possibly future applicants, other utilities in Arizona, and I guess I would also suggest that and make it clear that Staff may want to weigh in on this issue as well, and I think there is the rulemaking docket has just been opened up for the Rules of Procedure for this committee, and so it may be an issue that could be folded into that process, but I think, at a minimum, Staff would want to know that they're invited to weigh in and state their position if they have one on this issue.

CHMN STAFFORD: Yes, definitely. Thank you, Mr. Derstine.

MR. DERSTINE: Yes.

MEMBER LITTLE: Mr. Chairman?

CHMN STAFFORD: Yes, Member Little.

MEMBER LITTLE: Thank you, Mr. Derstine. Today there was a Staff meeting and that docket was discussed. We were all here so we don't have any idea what they discussed, but I agree, we are a committee of the Commission, and need to keep that in mind also.

CHMN STAFFORD: All right. With that being said can I get a motion for briefs?

MEMBER LITTLE: I so move.

CHMN STAFFORD: Do we have a second?

MEMBER GOLD: Second.

CHMN STAFFORD: Discussion?

(No response.)

CHMN STAFFORD: All in favor say "aye."

(A chorus of ayes.)

CHMN STAFFORD: Opposed?

(No response.)

CHMN STAFFORD: Hearing none, the motion passes. All right. So for a briefing schedule, the transcript will be available within three days.

Mr. Crockett, what do you feel is an appropriate deadline for you to file briefs? I think we just file an initial brief. I don't think there's going to be a need for a reply brief. I think a single round of briefs should be adequate.

MR. CROCKETT: Before I respond to that question, do you, Chairman Stafford, do you envision filing a procedural order in the docket that orders briefing and it opens it up to other parties?

CHMN STAFFORD: That's a possibility. Initially, you know at the end of a hearing, the parties file briefs, but I think in order to let anybody know we'd have to probably issue a procedural order to let them know that that's -- that other parties are invited to weigh in.

MEMBER LITTLE: I think so.

CHMN STAFFORD: I think when we send that to the Commission Staff, they could make -- the issue is that people who aren't following this particular docket won't know what's going on in it.

MR. CROCKETT: Right. That's my concern.

CHMN STAFFORD: They'll have no clue what's happening, other than APS and you, and I guess whomever you tell would know.

MR. CROCKETT: Yeah, and I think the large utilities, they'll know about this, and I think there's a pretty small universe of lawyers that practice with the applicants, so I think we can get the word out on this, but a procedural order might be helpful in terms of, you know, just identifying maybe what -- what the specific legal issues you'd like addressed in the brief are, and I'm just going to look at my calendar.

MR. DERSTINE: Maybe to jump around Labor Day that shows up early in September -- September the 8th, which is the Friday after the Labor Day week, that gives us a little more than 20 days.

MR. CROCKETT: That -- okay. I think that would work for the applicant.

CHMN STAFFORD: All right.

MEMBER LITTLE: We have hearings all that

week.

CHMN STAFFORD: Beg your pardon?

MEMBER LITTLE: We have hearings all that week. Not that that would matter.

CHMN STAFFORD: No, that's fine. We'd have something to read when we got back.

MEMBER LITTLE: During breaks, right?

CHMN STAFFORD: Yeah.

MR. DERSTINE: And, certainly, that was just a suggestion, it could come -- you could push it out later, I don't think there's any magic to that time frame. And for parties who haven't been present for this proceeding and aren't really aware of the issue and will have to educate themselves maybe on the transcript maybe more time is needed, I don't know.

CHMN STAFFORD: Right. Now, I'll have to -- so you both know to file briefs by the 8th, so that's -- that's definitely going to happen for you two, but then for the -- I'm wondering if I'm going to issue a procedural order in the next day or two announcing this or whether -- I think that would probably be best, because that would be -- that would make it more public notice inviting other people to file. So it won't have the date probably set for the open meeting for the committee to consider it -- to consider this matter

again, but that will come, that will be an additional procedural order letting -- setting -- well, yeah, it will be in the notice when we announce that meeting, it'll be -- when it comes out with the agenda, and that will go on the, I guess we'll have to figure out what docket, I think we've been putting things that were just generally Line Siting Committee matters in the substantive policy statement docket, it may be more appropriate to put it in the rulemaking docket. And it may be more appropriate to file the procedural order for the briefing in that docket as well, because then everyone would see it. I'll have to talk to Tod. But I think that we could certainly get it publicized because we want to hear from as many parties as we can, certainly all the incumbent utilities anyway.

MEMBER LITTLE: Mr. Chairman, could I make a general statement?

CHMN STAFFORD: Yes, Member Little.

MEMBER LITTLE: I would like to thank and compliment the applicant for the comprehensive work that they did in support of and in presenting to us the work that they did here for this application presentation. As a representative of the public, I particularly appreciate the public outreach. I appreciate you extending the notifications beyond the study area, since these -- these

projects do impact more than just the people that live real close to a line. People that live in -- in an area. I think you did an outstanding job, and I appreciate that. I also appreciate your understanding in the complexities of this whole planning process, and the adjustments and modifications that we are forced to make as a result of those changes. And I want to thank APS again for coming in and testifying.

CHMN STAFFORD: Thank you, Member Little. Any further comments from members?

(No response.)

CHMN STAFFORD: I'd like to thank the applicant and APS for coming here today and for all your testimony. I look forward to reading your briefs. I will issue a procedural order in the coming days announcing the deadline and opening up the briefing to other parties -- any interested parties.

So anything further for the good of the order?

MEMBER GOLD: Mr. Chairman?

CHMN STAFFORD: Yes, Member Gold.

MEMBER GOLD: When I was first sent to Bosnia, on my first day, I got off the airplane and --

MEMBER KRYDER: Your microphone.

MEMBER GOLD: When I was first sent to

Bosnia, I got off the airplane expecting to have a two-week transition and in-briefing from my fellow I was replacing. It turned out that when I got halfway down the plane ramp, he was walking up the plane ramp and leaving the country, leaving me something that was a black hole, as far as I was concerned.

I expected it in the military. I am very shocked to see that it happened to me again here in civilian life. But here I like the quick response that you are taking. I want to thank the applicant and all of you for really impressing me with what you are doing. And especially the attorneys, who I don't usually expect much from, but you guys did a great job, as well.

And, Mr. Chairman, thank you for putting up with my questions. But I am overwhelmed by this. This is faster than I've ever seen in the military, short of combat.

CHMN STAFFORD: Well, I hope you don't regret your decision to accept appointment to the Committee. Welcome to the deep end right out the gate.

MEMBER GOLD: Thank you.

MR. CROCKETT: Chairman Stafford, I would just like to chime in, I appreciate the committee being here to hear this case, and appreciate the complexity of the issues that are before you and we're, again, we're

appreciative of your time and the effort that you put into this important position that you have.

CHMN STAFFORD: Thank you, Mr. Crockett.

With that, we are adjourned.

Thank you.

(The hearing concluded at 2:12 p.m.)

STATE OF ARIZONA)
COUNTY OF MARICOPA)

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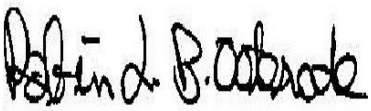

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