PUBLIC SERVICE COMMISSION

OF WEST VIRGINIA

CHARLESTON

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IN RE: NEXTERA ENERGY TRANSMISSION*

MIDATLANTIC, INC. * 26-0075-E-CN

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HEARING TRANSCRIPT

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BEFORE: CHARLOTTE LANE, Chairman

RENEE LARRICK, Commissioner

WILLIAM RANEY, Commissioner

HEARING: Monday October 26, 2026

9:31 a.m.

LOCATION: PSC Howard M. Cunningham Hearing Room

201 Brooks Street

Charleston WV

Reporter: Emily Stewart

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P R O C E E D I N G S

CHAIR:

Good morning. I'm Charlotte Lane, Chairman of the Public Service Commission of West Virginia. With me are Commissioners Renee Larrick and Bill Raney. Please check your cell phones to make sure they're turned off or set to vibrate only. And if you need to take a call during this proceeding, please step outside.

We are here today to conduct an evidentiary hearing in case number 26-0075, NextEra Energy Transmission MidAtlantic, Inc. On January 30th, 2026, NextEra Energy Transmission MidAtlantic filed an application seeking a Certificate of Public Convenience and Necessity for service, West Virginia Code 24-2-11A. The application requests Commission authorization to construct, finance, own and operate the West Virginia portions of the MidAtlantic Resiliency Link Project, otherwise known as MARL project, a proposed 107.5 mile 500kV interstate electric transmission line. The West Virginia components of the MARL project consists of 58.9 miles of transmission line and related facilities related or located in Monongalia County, Preston, Mineral and Hampshire Counties. Only the West Virginia portion of

the MARL project are before us today. The purpose of this hearing is to develop a complete evidentiary record regarding the proposed MARL project.

Before we begin taking testimony, the Commission would like to address several procedural matters and remind the parties of the requirements governing this hearing. Given the large number of parties participating in this proceeding, these procedures are necessary to ensure that the hearing proceeds fairly, efficiently and in an orderly manner. First, the Commission recognizes that parties have raised questions and concerns regarding the conduct of this hearing. This is an evidentiary hearing, not a public comment hearing. Only parties who have filed pre-filed testimony may testify at this hearing except upon leave of the Commission for good cause shown. The Commission will not permit opening statements by any parties. The parties positions are reflected in their filings and pre-filed testimony and the hearing will proceed directly to the presentation of evidence.

Second, the Commission reminds all parties that testimony and questioning must be relevant to the issues the Commission is required to consider. Accordingly, the Commission expects parties to focus their testimony and question on the requirements set

forth in West Virginia Code 24-2-11A.

The statute states no public utility person or corporation may begin construction of a high voltage transmission line of 200,000 volts or over, which line is not an ordinary extension of the existing system in the usual course of business as defined by the Public Service Commission, unless and until it or he or she has obtained from the Public Service Commission a Certificate of Public Convenience and Necessity approving the construction and proposed location of the transmission line.

Within 60 days after the filing of the application or if hearing is held on the application, within 90 days after final submission or oral argument or brief, the Commission may approve the application if it finds that the proposed transmission line will economically, adequately and reliably contribute to meeting the present and anticipated requirements for electric power of the customer served by the applicant, or as necessary and desirable for present and anticipated reliability of service for electric generation for its service area or region, will be in the best interest of West Virginia customers and its citizens, and will result in an acceptable balance between reasonable power needs and reasonable environmental factors.

The Commission may impose conditions upon the approval of the application or modify the applicant's approval to achieve an acceptable balance between reasonable power needs and reasonable environmental factors. Testimony and Cross Examination must be directed to these statutory conditions or considerations and the issues properly before the Commission. The Commission will not permit irrelevant, repetitive, or duplicative testimony or questioning. If another party has already adequately addressed a matter with a witness, there is no need to ask the same questions again. Third, the Commission previously required each party to identify the Intervener witnesses that the party anticipated cross examining. The Commission will not impose a predetermined time limit or numerical limit on the questions that an Intervener may ask a witness. However, all questions must be relevant to the issues in this proceeding, directed to the testimony of the witness being questioned, and not duplicative of questions already asked. Cross Examination is not an opportunity to testify, make an argument, or conduct discovery.

The Commission expects parties with similar interest to coordinate their questioning and avoid unnecessary repetition. Under procedural rule 12.6.5 when Interveners have substantially similar

interests and positions, the Commission may limit the number of parties who may cross examine witnesses, make and argue motions, or object on behalf of those interveners to expedite the hearing. The Commission also reserves the authority to impose reasonable limitations on questioning when necessary to maintain an orderly and efficient hearing. Fourth, all witnesses scheduled for a particular day must be present at the beginning of that day and prepared to testify when called.

The hearing will generally begin at 9:30 and break for lunch between 12:30 and 1:30. The Commission does not intend to establish a fixed ending time for each day. Instead, the Commission will continue each day until the scheduled hearings have completed their testimony and all appropriate questioning has concluded. The Commission will determine when recesses or adjournments are necessary. Fifth, if a party wishes to object, please state that you have an objection and wait to be recognized. Once recognized, briefly state the basis for the objection. The Commission may allow a response from another party before ruling on the objection.

Six, the Commission reminds corporations, limited liability companies, homeowners associations, nonprofit organization, county commission and other

artificial legal entities that they must be represented in this proceeding by an attorney licensed to practice law in West Virginia. An officer, employee, member or other representative who is not an attorney may not act as legal counsel or represent such an entity during this period. The Commission recognizes that many parties in this proceeding are participating without counsel. All parties, whether represented by Counsel or appearing Pro Se, are expected to comply with the Commission's procedural orders, the orders previously entered in this case, and the directions of the Commission during this hearing.

Finally, the Commission has received recent motions requesting that it impose certain conditions if it approves the proposed project. The motions raise issue about potential construction-related impacts and appropriate measures to address them. The Commission will defer ruling on the requested conditions until it has considered the evidentiary record. The parties may address these matters through relevant testimony and Cross Examination during the hearing. The Commission will determine whether any conditions are warranted when asking its final --- when making its final determination on the application.

Ordinarily, at the beginning of a hearing,

the Commission calls on each party to enter an appearance on the record. Given the number of parties participating in this proceeding, the Commission will instead use a daily attendance sheet to identify the parties present at the hearing. All parties attending the hearings shall sign the attendance sheet each day they are present. If you are present today and have not signed the attendance sheet, please do so now. The attendance sheet is intended solely to assist the Commission in managing the hearing and maintaining a record of attendance. Signing or failing to sign the attendance sheet does not affect a party's status or any rights otherwise afforded to that party in this proceeding.

The Commission will now take appearances on the record from those parties represented by Counsel.

ATTORNEY CALLAS:

Good morning, Madam Chairman. My name is Chris Callas. I'm with the law firm of Jackson Kelly in Charleston, West Virginia. I am here representing Next Era MidAtlantic --- NextEra Energy Transmission MidAtlantic, Inc. We will refer to that as NEET MA or probably in the moment, just NEET throughout this hearing. I'm accompanied by my colleague, Nicklaus Presley, sitting to my right. And also to my right, Tracy Davis, Managing Attorney with NextEra. We look

forward to addressing the Commission today.

CHAIR:

West Virginia Against Transmission Injustice.

ATTORNEY HANNA:

Yes. Thank you, Chairman Lane, Commissioners Raney and Larrick --- and Larrick. My name is David Hanna, Counsel for West Virginians Against Transmission Injustice, also referred to as WATI.

CHAIR:

WVEUG.

ATTORNEY WILLIAMSON:

Thank you, Chairman. Good morning, Vice Chairman, Commissioner Larrick. My name is Derrick Williamson. I'm with the West Virginia Energy Users Group. I'm here with my colleague and partner, Carrie Grundmann. We are representing WVEUG. We will refer to them as that. And for purposes of this case, that group includes Antero Resources in its capacity as a large consumer of power, the Chemours Company, Constellium Rolled Products, Kibar Americas Fairmont, Marathon Petroleum, Mark West in its capacity as a large consumer of power, Messer Quad, Rockwool, Westlake Natrium, Weyerhaeuser, WVA Manufacturing and Phibro Animal Health. Thank you.

CHAIR:

Intervener Group.

ATTORNEY HARKINS:

Good morning, Chairman Lane. Clayton Harkins on behalf of the Intervener Group. I'm happy to outline all the individuals if requested, but otherwise, we'll refer to them as the Intervener Group.

CHAIR:

Okay. So can you outline who you represent?

ATTORNEY HARKINS:

Yes, ma'am.

CHAIR:

Could you speak closer to the microphone, please?

ATTORNEY HARKINS:

Yes, ma'am. It's --- it's William Millison and Emily Millison. William Keaton and Becky Keaton, Silas Millicent, James Marino and Susan Binhavu, Troy Haynes and Amy Haynes, Charles Carl and Lisa Carl, Benjamin Haynes and Carter Wagner.

CHAIR:

Lake O'Woods Club.

ATTORNEY MCGHEE:

Good morning. My name is John McGhee from

the law firm Kay, Casto and Chaney representing Lake O'Woods Club Homeowners Association.

CHAIR:

James Raucus (phonetic) and JE Raucus Rental and Supply.

Hampshire County Commission, Mineral County Commission, Preston County Commission, Monongalia County Commission and Ponderosa Pastors --- Pastures Court.

ATTORNEY STEPHENS:

Good morning, Madam Chairman and Commissioners. Bradley Stevens appearing on behalf of the County Commissions and Ponderosa Pastures Corporation. Thank you.

CHAIR:

Spin Saddle, LLC. Consumer Advocate.

ATTORNEY WILLIAMS:

Good morning, Chairman Lane, Commissioners Raney and Commissioner Larrick. My name is Robert Williams. I'm the Director of the Consumer Advocate Division. With me today is John Auville of our office.

CHAIR:

Staff.

ATTORNEY WILSON:

Good morning. Thank you for not

forgetting me this morning.

CHAIR:

I know. I get a star.

ATTORNEY WILSON:

Victoria Wilson on behalf of the Staff of the West Virginia Public Service Commission. And I've got with me Lucas Head and Daniel Egnatoff with the Engineering Division.

CHAIR:

Before beginning the presentation of evidence, are there any preliminary matters that need to be addressed?

ATTORNEY CALLAS:

Yes, Your Honor. I have a couple. And first of all, I want to thank you for the extended explanation at the outset of the hearing about process. That answered a few of my questions, but I have a couple more. As far as unresolved or unaddressed motions, there is a pending motion for admission pro hac vice for a Kurt Renner that's not been addressed yet, which I --- seems odd given how quickly those often come out. So I wanted to bring that to the Commission's attention.

CHAIR:

Has that person paying the fee?

ATTORNEY CALLAS:

I --- I think so. We're usually responsible for that. But is that --- is that the key to that happening?

CHAIR:

That's the key. I'm on the Board of Governors for the State Bar and that plays a big part of the budget.

ATTORNEY CALLAS:

Okay. Does it really? I believe that. Okay. Well, we --- we will ensure that has happened and check back with you.

CHAIR:

Okay. So the motion is granted.

ATTORNEY CALLAS:

Okay, thank you. You mentioned the two pending motions that the Commission has chosen to defer. They're filed by Ms. Blancato and Ms. Trueblood. The applicant requests the opportunity to present some additional oral rebuttal at the outset of the presentation. I think of our witness, Ms. Heater, to address the request that those parties have made in those motions. You know, I guess we can't - first of all, only Ms. Blancato is, of those two, as indicated an intent to cross examine any of our witnesses. So there's no certainty that that material would come up other than

through additional oral rebuttal.

CHAIR:

Okay, thank you.

ATTORNEY CALLAS:

As to expectations for the upcoming days, there, by my count, are 61 unrepresented Interveners. And of that group, 41 of those did not respond by --- to the Commission's order or whatever the last order was requesting that people indicate whether or not they wish to have their testimony admitted without the need to sponsor it in person. So that leaves 41 people who, by my assessment, did not submit such a request, are unrepresented and according to the various requests for Cross Examination, have no one to cross examine them.

My question for the --- for the group in the hearing is how the Commission intends to address those in terms of how that testimony will be sponsored. And I'll tell you the reason for this inquiry, we're not crossing any of them, is to know how quickly those will move through the last couple days of scheduled witnesses to the hearing. And as a consequence, when the witnesses that we intend to Cross, which are only three, are likely to be taking the witness stand. In other words, will they be moved from Friday and Monday up to potentially Thursday in that situation?

CHAIR:

As I understand your question, you want to know what we are doing with the 41 people who have filed pre-filed testimony but did not indicate that they want to cross examine anyone?

ATTORNEY CALLAS:

Who did not indicate that they wish to have their testimony admitted without the need to sponsor it. And I --- I suspect that many of those simply didn't read the order, didn't comply, don't intend to be here. So, you know, it may --- this may be an issue that's in concept only. The third, you know, characteristic of all 41 of those is that by my count, no one intends to ask them any Cross Examination at all.

CHAIR:

We are going to pre-admit or admit without specifically doing so from the stand all pre-filed testimony, including all individual Interveners who did not have counsel. So everything that has been submitted as pre-filed testimony by anybody will be admitted into the record.

(HCC's Exhibit JLM-D was marked for identification.)

(Intervener's Exhibit AF-D was marked for identification.)

(Intervener's Exhibit AMM-D was marked for identification.)
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(WATI'S Exhibit CMK-D was marked for identification.)

(Staff's Exhibit DWE-D was marked for identification.)

ATTORNEY CALLAS:

Thank you, Your Honor. That's all we have.

CHAIR:

Okay. And so at this time, we will admit all pre-filed testimony into the record. With that, Mr. Callas, you can call your first witness.

ATTORNEY CALLAS:

Thank you, Your Honor. NEET MA's first witness is Kaitlin McCormick.

CHAIR:

Oh, before we get started, because of the large number of people that we have and because of the shortened times --- time period for lunch and because we don't have very many places around here where we can eat, there will be food trucks out in the parking lot, I think starting at 11:30. And I think it's 11:30 to 1:30. So feel free to take advantage of that. And with that, we can have our first witness.

ATTORNEY CALLAS:

Thank you, Your Honor.

COURT REPORTER:

Can you please raise your right hand?

KAITLIN MCCORMICK, HAVING FIRST BEEN DULY SWORN, TESTIFIED AS FOLLOWS:

DIRECT EXAMINATION

BY ATTORNEY CALLAS:

Q. Good morning, Ms. McCormick.

A. Good morning.

Q. Could you --- you've got the --- you remember what I told you, didn't you? You pulled that mic right up close.

A. I did.

Q. Thank you. Could you give your name and business

address?
A. Yes. My name is Kaitlin McCormick and my business address is 700 Universe Boulevard, Juno Beach, Florida.
Q. How are you employed?
A. I'm a Senior Director, NextEra Energy Transmission, supporting the project execution team.
Q. In that capacity, have you been involved in, I think it's fair to say nearly all aspects of the development of the project and the presentation of this case at the Commission?
A. I have.
Q. In that connection, did you cause to be prepared, Direct and Rebuttal Testimony in this case?
A. I did.
Q. Do you have copies of that testimony in front of you in the binder to your left?
A. I do.
Q. Do you have any corrections or changes you believe need to be made to make that testimony truthful and accurate today?
A. I do not.
Q. Okay. If I ask you the same questions today, would you provide the same answers?
A. I would.
Q. And do you ask that the Commission adopt that as

your sworn testimony in this case?
A. I do.
Q. Okay. Are there also a number of other filings, by my count, seven, that the applicant has made and that you are in a position to verify as an appropriate representation of the company in each instance?
A. Yes.

ATTORNEY CALLAS:

Okay. Your Honor, we supplied to the parties and the Commission on Friday a list of our exhibits. And the Commission will see that the first seven of those listed --- listed NEET MA Exhibits 1 through 7 represent the application, a supplement filed on the 3rd of March, two route revision supplements, and three additional pieces of evidence that the Commission in its last order required the applicants to file, all of those, just for the ease of the parties, are found on --- on the --- the library cart there near the door behind the witness stand, and they're also with the Court Reporter.

(NEET MA's Exhibit 1 was marked for identification.)
(NEET MA's Exhibit 2 was marked for identification.)
(NEET MA's Exhibit 3 was marked for

identification.)

(NEET MA's Exhibit 4 was marked for identification.)

(NEET MA's Exhibit 5 was marked for identification.)

(NEET MA's Exhibit 6 was marked for identification.)

(NEET MA's Exhibit 7 was marked for identification.)

BY ATTORNEY CALLAS:

Q. Ms. McCormick, did you have a role in preparing and approving all seven of those pieces of evidence?

A. Yes.

Q. Do you ask that the Commission admit those into evidence today?

A. Yes.

ATTORNEY CALLAS:

Okay. Your Honor, with that, I offer Ms. McCormick for Cross.

ATTORNEY WILLIAMSON:

Madam Chairman, this is Mr. Williamson. Real quick.

CHAIR:

Yes.

ATTORNEY WILLIAMSON:

Mr. Callas, did --- did you include in that --- I'm --- I'm not seeing it. You made a September 9th, 2026 filing in response to one of the Commission orders.

ATTORNEY CALLAS:

Can you be more specific, Mr. Williamson? I don't think so, but let me --- let me check.

ATTORNEY WILLIAMSON:

It was letter filing verified statement in compliance with August 10, 2026 order filed by you on September 9th, 2026. And it's an excerpt from the Form 10K.

ATTORNEY CALLAS:

No.

ATTORNEY WILLIAMSON:

And that was intentional?

ATTORNEY CALLAS:

Yes.

ATTORNEY WILLIAMSON:

All right.

CHAIR:

Anything further, Mr. Williamson?

ATTORNEY WILLIAMSON:

No, ma'am. Thank you.

CHAIR:

Mr. Hanna.

ATTORNEY HANNA:

Thank you.

CROSS EXAMINATION

BY ATTORNEY HANNA:

Q. Hello, Ms. McCormick.

A. Hello.

Q. In your Direct Testimony, you identify an estimate or make an estimate that there's 200 to 300 construction jobs within the State of West Virginia that the MARL line is supposed to result in; is that correct?

A. That is correct.

Q. Where --- where did you come up with that estimate or is that something you created over the team?

A. It is something that was created with the team. And so as the part of our estimates and planning for the project, we would have worked with our construction and with our economic modeling team to come up with that estimate.

Q. Are there any specific contractors that have already been selected to do the construction work?

A. We have not yet selected a construction contractor at this time.

Q. Is there any --- is there any reason to believe that a contractor based in West Virginia would be selected to

--- to do the construction?
A. They may be. That has not yet gone up for bid. But we have received interest from a number of firms as we work through this to get added to the vendor as an opportunity to bid.
Q. There's no --- I guess there's no guarantee that those jobs will go to a West Virginia contractor. Is that accurate?
A. That has not gone out to bid yet and I would --- Mr. Givens is our witness that can specifically talk about the contracting process for that.
Q. So would he also be the correct to ask about whether or not any of these jobs would be able to --- would go to West Virginia residents?
A. Mr. Givens can speak more specifically on the contracting process. And at this time, as we have not yet awarded a contract, I can't speak any more specifically to that.
Q. Okay. You also identify in your Direct Testimony, Mr. Deskins with the W Bureau of Business and Economic Research, who --- who submitted testimony in this case and also did a report on the economic impact of the MARL Project in West Virginia. Do you recall that testimony?
A. I do.
Q. Did you have any conversations with Mr. Deskins as

he was preparing his report?
A. Our team met with him several times to provide the economic inputs to support his analysis as well. Some of our studies and our data.
Q. What --- what type of economic input did you provide Mr. Deskins?
A. He received some input from Mr. Givens on the type and nature of construction. We provided input on the length of the project and our assumptions therein.
Q. And Dr. Deskins, he took your --- your assumptions in order to create his report; is that correct?
A. He did his own analysis. And Mr. Deskins will be available on Wednesday for any specific analysis. But his testimony is outlined in that specific study.
Q. Okay. So in your --- Ms. McCormick, in your Rebuttal Testimony, you referenced that there were seven instances where notice of the application was not originally provided to impacted landowners; is that correct?
A. That is correct.
Q. How --- how was that missed? Do you know?
A. So as part of our process, we identify and work through to identify every affected landowner, identify the full list, and then as part of our customary review, we noted that they were --- they were missed and then

promptly sent follow-up notice to them.
Q. Do you have any idea if there's others out there that were missed?
A. There are no others that were missed. We did a review of that and then submitted those.
Q. In sending out any notifications, was there ever any issue with mailing to a physical address that was returned?
A. The --- if we had a notice that was returned, we confirmed the --- the tax address and the mailing address and then resubmitted those notices.
Q. And as far as you know, those have all --- any --- any mailing that was returned, a correct address was found and sent to the landowner? Is that ---?
A. To the best of my knowledge.
Q. Do you know Tony Campbell with WATI?
A. Yes.
Q. And you've had conversations with him before?
A. Yes, I have met him.
Q. Specifically, I wanted to address something that he stated in his Rebuttal Testimony that he had --- had a conversation with you relaying concerns at the Keyser public comment hearing regarding landowners contact with land agents. Do you recall a conversation like that with Mr. Campbell?

A. I --- I believe I do recall that conversation.
Q. Do you know what kind of concerns he was relaying?
A. I don't have those coming specifically to mind.
Q. So in response --- in response to concerns that you heard from Mr. Campbell about landowners interaction with the land agents, what did you do with that information?
A. Any --- any specific concern with the landowner and a land agent, we take back to our land team. And so, should he have identified the specific agent or property owner, I would have raised that concern directly back to --- to Ms. Powers, who is testifying on behalf of our land items. And that would have been handled through our land team directly.
Q. And Ms. Powers is the head of the land team; is that correct?
A. Ms. Powers leads the land team for NEET.
Q. So to the extent that any concerns that landowners brought to you with land agents, you would have passed those on to Ms. Powers?
A. Yes, Ms. Powers or one of the leadership members of her team.
Q. Are there --- is she the only part of the --- of that team that's testifying in this case?
A. Yes.
Q. Okay. Do you have --- as part of your job at this

project, did you have any direct conversations with landowners or is that not part of what you were tasked to do?

A. I have met with some of the landowners, whether at an open house as part of --- before or after one of the public hearings or throughout some of the other specific interactions, but those are primarily handled through our land team.

Q. I wanted to ask you a question about Exhibit 7 that was filed on Friday. And do you have copy of that?

A. If you could provide me one.

Q. NEET MA Exhibit 7, the schedule of landowners who have executed agreements with NEMA. Do you have that in front of you?

A. I do.

ATTORNEY HANNA:

Thank you, Mr. Callas.

BY ATTORNEY HANNA:

Q. So this is --- this spreadsheet, which is, like I said, the schedule of landowners who've executed agreements, under the column of the agreement type, I see reference to option and transmission agreement. And I think there's also in here, I may have seen something that just said transmission easement or option and transmission easement and --- and then I've seen one that

says transmission easement. Do you know if there's any difference between an option and transmission easement and a transmission easement?

A. So the transmission easement would be an easement for a right of way and an option would be the option to acquire that right of way. More specifically, I would --- Ms. Powers would be best placed to answer any of those specifics on the contract types.

Q. So would Ms. Powers also be the correct person to ask what the real estate purchase option agreement would entail that appears on here in a couple spots?

A. My understanding is that that would be an option to purchase the property, but Ms. Powers would be best placed to provide any additional detail.

Q. Okay.

So would she also be the appropriate person to ask what criteria is used in order to consider purchasing a landowner's property?

A. She would.

ATTORNEY HANNA:

Okay. Thank you, Ms. McCormick. I have no further questions.

CHAIR:

Mr. Harkins.

ATTORNEY HARKINS:

I have no questions for this witness. Thank you.

CHAIR:

Mr. Williamson.

ATTORNEY WILLIAMSON:

Yes, ma'am. Thank you, Chairman. I know. Mr. Presley --- Mr. Presley may ---

CHAIR:

You can slide that.

ATTORNEY WILLIAMSON:

--- shift ever --- ever so slightly that way.

CROSS EXAMINATION

BY ATTORNEY WILLIAMSON:

Q. Good morning.

A. Good morning.

Q. I represent WVEUG. We did not submit testimony. And notwithstanding the Chairman's admonishment, our concerns are with the ultimate cost of the project and how those costs are allocated to West Virginia and then among ratepayers in West Virginia. So I just want to ask you some questions surrounding that and some other clarifying questions because we're trying to understand the totality of the filing. First really important question, you went to Allegheny College, the Allegheny

College that's in Pennsylvania; is that correct?
A. Yes, sir.
Q. I don't see that on too many resumes.
A. Go Gators.
Q. Good for you. In your --- your testimony, you list all witnesses to the case and there --- there are two witnesses that work for PJM. Can --- can you explain or describe how that relationship works in terms of their presentation of testimony in this case?
A. So PJM identified the need for this project and is a witness to testify to the specific electrical need for this project and will be speaking later today.
Q. So there are two --- two witnesses, I believe, right, Mr. --- Dr. Abdulsalam and Mr. Gledhill, is that right?
A. That's correct.
Q. And so that was done --- so those witnesses were identified by PJM and you coordinated their presentation of materials here?
A. Correct. We reached out to PJM for supporting testimony to identify the specific need and analysis that was done that resulted in the selection of the MidAtlantic Resiliency Link.
Q. And is there any contractual relationship associated with their presentation of testimony?

A. We are contracted to PJM under the designated entity agreement to do the work, but there is no contractual relationship, to my knowledge, for them to be here today.
Q. Okay. So they're still --- they're appearing here solely as employees of PJM?
A. Correct.
Q. Okay, thank you. And I think your testimony indicated that you --- you testified in one other place. That was in New York; correct?
A. I provided written testimony.
Q. Written testimony in New York. And was that also with respect to a transmission line being developed?
A. No. It was a power generation facility.
Q. Oh, power generation. Okay, very good. Thank you. Well, welcome to your first offering of oral testimony here before the Commission.
A. Thank you.
Q. Kind of just work through the application a little bit. I'm presuming you are the chief sponsor of the application. To the extent that you think there's another witness, one of the benefits of going first is you can push that along as needed. So feel free if you're not entirely comfortable responding to those questions. At page four or, excuse me, paragraph four, page six of the application --- and I'm --- I'm not using

the Bates pagination because I find it confusing, but it's the application itself.
A. I believe Mr. Callas is bringing that over. You said page four?
Q. I was mistaken. It's page six, paragraph four.
A. I have it in front of me.
Q. And you --- you provide a rough geographic description of the MARL project and who is responsible for what; correct?
A. Correct.
Q. And I just want to make sure the record is clear that there is an additional component of the MARL line that is to be built by, subject to certification, FirstEnergy in the Potomac Edison service territory in West Virginia.
A. The --- there is a Gore/Dobbs/Goose Creek project that we hand off from our project, too. That project is being completed by FirstEnergy. That is a separately awarded project by PJM. It is not part of the scope of the MidAtlantic Resiliency Link.
Q. Okay, thank you. But it is --- is it attendant to it? Is it --- there --- there is a connection between the MARL line and that First Energy line?
A. Yes. They are electrically connected.
Q. Okay. Do you --- can you turn to Attachment C?

A. I have it in front of me.
Q. And various witnesses articulate in writing the connections between the various NextEra entities, but I just wanted to clarify that if we work down from the top of Attachment C, we have NextEra Energy; correct?
A. At the top, correct.
Q. Yep. And then second in line is NextEra Energy Capital Holdings, sometimes referred to as NEECH, it would appear; is that correct?
A. That is correct.
Q. And then of relevance, the subsidiary below NEECH is NextEra Energy Transmission, NEET; correct?
A. Correct.
Q. And then if we follow the relevant line of subsidiaries, we next have NextEra Transmission MARL Holdings, LLC; correct?
A. NextEra Energy Transmission ---
Q. Thank you.
A. --- MARL Holdings, LLC.
Q. Thank you for the correction. Very well done. And then at this juncture then, of most relevance, we have NextEra --- so the fifth in line, NextEra Energy Transmission MidAtlantic; correct?
A. Correct.
Q. And that's what has been referred to as NEET MA,

N-E-E-T-M-A for the Court Reporter.
A. Correct.
Q. Okay.
I was asking about the compliance filing of --- that Mr. Callas had made because it has additional information. It also lays out this --- the --- the entities that come --- that are relevant here within the NextEra family. Do you happen to have that filing?
A. I don't have that in front of me right now.
Q. It's --- we can work around it. We don't need to be cumbersome. But would you accept subject to check that that indicates that NextEra's total assets as of December 31, 2025 were $212.7 billion dollars?
A. I don't have that in front of me.
Q. Would you accept it subject to change?
A. I would presume if that's what was in the filing, that that is correct.
Q. It is in the filing. And do you happen to know what NextEra Energy's market capitalization is?
A. Do not have that in front of me.
Q. All right, thank you. Okay. Moving on. So if we turn to Attachment B of the application. And there are references in the application itself and in your testimony. This is the Designated Entity Agreement or the DEA. Do you have that?

A. I do.
Q. Did you participate in the development of the DEA?
A. I was part of the team that was --- supported this.
Q. In what manner did you specifically support it?
A. Typically that is led by some of the team that supports the bid. In our relationship with PJM, I am aware of the filing and was supportive during that process.
Q. What support did you provide is the question I asked.
A. Would have reviewed the document, checked the milestone dates and made sure that I understood what was included therein.
Q. Are you familiar with the cost containment components of the DEA?
A. I am aware of their --- that they are included in there and the specifics of all of that. I would refer you to Mr. Colley and his testimony.
Q. Very well done. It'll be Mr. Colley on that then. At the application paragraph 29 ---.
A. Can you provide that page --- page number?
Q. I will. It's page 20, paragraph 29.
A. I have that in front of me.
Q. The current, maybe not current. It reflects here a cost estimate of $1.167 billion dollars; correct?

A. Correct.
Q. And it indicates it's in 2031 dollars. Can you explain what that means?
A. Mr. Colley walks through the specifics of this in his testimony, but those are the --- the escalated dollars that would have been spent at the time of --- of completion.
Q. Escalated from what point in time?
A. The time of the bid. Mr. Colley is best poised to answer really specific questions on the cost.
Q. I will certainly ask him. It also appears in your testimony. So ---
A. Yeah.
Q. --- just want to make sure you have an opportunity to try to answer the question.
A. Yep.
Q. And you also have a reference there to the West Virginia portions in the application; correct?
A. Correct.
Q. And what's the purpose of including that information?
A. This information was included just to provide the specifics of the capital expenditure that would occur within the portion of the project constructed in West Virginia.

Q. And does that have any relationship to how the cost of the project are allocated to West Virginia?
A. This is specifically with regard to the cost of construction.
Q. Not the allocation; correct?
A. Correct.
Q. And would you agree that project costs are subject to adjustment in the future?
A. The cost estimates, as we bring a contractor on board or --- or make other steps may be adjusted. But this is the current cost estimate.
Q. Yeah. So if we scroll down to the bottom of paragraph 29, there's a series of things that could cause adjustments to the cost; correct?
A. The additional numbers that are found in paragraph 29 are the components that make up the 1.167 plan.
Q. Yeah, and that's fair. I'm just talking about the sentence --- the --- the last sentence, second to last sentence, that the estimate is subject to adjustment related to a series of potential factors. You --- you would agree with the statement in the application?
A. I would.
Q. There's a reference to this in your testimony, but also at paragraph, beginning at paragraph 30 of the application regarding rate recovery and rate impacts in

West Virginia.
A. You're referring to paragraph 30?
Q. I am referring to paragraph 30 and it --- it is perhaps more relevant in paragraph 32. But why --- why do you think that those rate recovery issues and rate impacts are relevant to the case here today?
A. Rate recovery is relevant as that reflects the covering the cost of the --- the project. And that is addressed further in the testimony of, I believe, Mr. Boykin and Ms. Menhorn.
Q. And so you --- you would agree, though, that the retail rate impact associated with line is an issue that the Commission needs to evaluate; correct?
A. That's why it's included in the testimony here.
Q. If you said no, that's what I was going to say.
A. Yeah.
Q. All right, okay. There's a supplemental application filed. Do you happen to have that?
A. Yes.

ATTORNEY CALLAS:

By that, Mr. Williamson, do you mean the --- the filing of March 4th?

ATTORNEY WILLIAMSON:

Yes, sir. It should be ---

ATTORNEY CALLAS:

Supplement to application.

ATTORNEY WILLIAMSON:

--- Exhibit Number 2 in that binder to your --- to your right there on the ---.

A. I have that.

BY ATTORNEY WILLIAMSON:

Q. At the bottom of what is labeled as page one, I think it says Bates page five, here --- following on my questioning about cost to retail customers, do you recall the reason why you filed the supplement to the application?

A. Yes. Ms. Menhorn made a correction to her formula and she can speak to that analysis that she updated.

Q. But the correction changed the allocation of dollars as it would impact different zones, but more specifically, West Virginia retail ratepayers; correct?

A. Correct.

Q. At the bottom of the page, it says the ATR --- ATRR will instead be allocated to the affected PJM transmission zones on a 50/50 basis. Do you know what the affected PJM transition zones are?

A. They're outlined in Ms. Menhorn's testimony in the supplemental application. I would refer you to Ms. Menhorn to speak to the specifics of --- of that.

Q. Okay. And then turning to your Direct Testimony,

pages 33 and 34.
A. I have that in front of me.
Q. Your testimony indicates there are numerous benefits for West Virginia. By my count, you list four. And I just want to evaluate those with you. The first is the grid reliability benefits that the project will provide; correct?
A. Correct.
Q. The second, Mr. Hanna discussed this a little bit, are the estimated 200 to 300 construction jobs in West Virginia; correct?
A. Correct.
Q. Do you know what the anticipated construction period is?
A. We anticipate construction occurring from November of 2029 through the end of 2031.
Q. So the 200 to 300 construction jobs identified here would --- would have an impact within that same time frame; correct?
A. Correct.
Q. The third thing you list as a benefit is the $133,000,000 in property tax payments. Do you recall that testimony?
A. Correct. Yes, I do.
Q. Do you know over what period of time that

$133,000,000 valuation spans.?
A. It is estimated to occur over the 40 year life of the project.
Q. So it's $133,000,000 in payments over 40 years?
A. Yes.
Q. Okay. And then lastly, you --- you indicate $65,000,000 in payments to landowners. Are those similarly to be provided over a period of time or are they one time or is it a combination of both?
A. Our payment structure for landowners typically includes a payment at the time of an option, as well as then when that agreement is executed, they will receive a one-time payment.
Q. A one-time payment. Most of them will be one-time payments?
A. Correct.
Q. Okay.
A. With the option ---
Q. Understood.
A. --- and then the one-time payment.

ATTORNEY WILLIAMSON:

All right, thank you. I have no additional questions.

CHAIR:

Mr. McGhee.

ATTORNEY MCGHEE:

Thank you. By agreement, no question from Lake O'Woods.

CHAIR:

Thank you. Mr. Stephens.

ATTORNEY STEPHENS:

Thank you, Madam Chairman.

CROSS EXAMINATION

BY ATTORNEY STEPHENS:

Q. Good morning, Ms. Menhorn. I am Bradley Stephens here on behalf of the County Commissions and Ponderosa Pastures Corporation, several of the interveners in this case. Are --- are you only authorized to testify on behalf of the applicant and related NextEra Energy affiliates?

A. Can you clarify your question?

Q. How about I ask it a different way? Are --- are you authorized to testify on behalf of any other entity or party other than the applicant and any affiliated or involved NextEra energy companies?

A. I am not.

Q. Okay.

What communication or coordination did the applicant have leading up to the hearing commencing today with FirstEnergy or its distribution companies, Mon Power and

Potomac Edison? Could you describe generally what that coordination or communication has been?
A. Yes. We have worked with FirstEnergy first to execute an interconnection coordination agreement because we will be interconnecting with two of their substations, as well as the handoff point. In addition, we have met with them on a roughly monthly or slightly more frequent basis over the life of the project to coordinate those interconnections, as well as any sort of engineering requests or data requests that come with that.
Q. Thank you. Anything beyond that scope of involvement that --- that you just described?
A. They came to some of our open houses and so we've coordinated with some of their staff that have popped into those type of events.
Q. Okay, thank you. Same question for AEP and its affiliates, Appalachian Power and Wheeling Power. Any coordination or communication through the process with those companies?
A. AEP does not interconnect to --- we don't have any interconnection with them. We have not coordinated with AEP as a result of this project.
Q. How about --- I believe there --- one of the other witnesses, perhaps Dr. Abdulsalam, makes reference to a LIDAR SAG study that PJM directed AEP to conduct for the,

I believe it's the Kammer-502 transmission line with --- with NextEra or its affiliates, been in communication directly with AEP concerning that?

A. Not to my knowledge.

Q. Okay. I was going to ask just a few questions about page 34 of your Direct Testimony. Mr. Williamson beat me to most of that. So in the interest of efficiency, I don't --- don't need to ask exactly what I was going to ask. But concerning his latter question about the $65,000,000 in payments to landowners over the life of the project, I just want to clarify, do I understand your testimony there to --- do I understand it correctly that you're saying over the life of the project, that's only in reference to the property tax payments that would flow to the respective counties and not to landowner payments?

A. There are two numbers referenced on page 34. $133,000,000 is the estimated property taxes that would be associated with facility. The $65,000,000 is payment and compensation for the easements and any option payments as well.

Q. Okay. I guess what I'm trying to clarify is are --- would any of the payments to landowners be further in time or be tendered further in time than upon the execution of an option agreement and the transmission line easement ultimately? Is there anything later in

time going to landowners monetarily?
A. Not to my knowledge. But Ms. Powers would be able to walk you through the specifics of how our payment to landowners are structured.
Q. Okay. So --- so if I were to ask you how did you come up with the $65,000,000, would you similarly refer that question to Ms. Powers?
A. So the $65,000,000 would have been the estimate that was compiled based on the knowledge from some of the analysis on market rates for property relative to the acreage of the right of way easement and then compiled for calculation based on that information. The estimate for those payments would have come from Ms. Powers' team.
Q. Okay. So if I have maybe more specific questions as to how that figure was arrived at, should I ask Ms. Powers instead of you?
A. She would be best poised to answer those questions.

ATTORNEY STEPHENS:

Okay. Well, thank you, Ms. McCormick. I believe that's all I have.

CHAIR:

Okay, thank you. Mr. Williams.

ATTORNEY WILLIAMS:

I think I just have a couple general questions.

CROSS EXAMINATION

BY ATTORNEY WILLIAMS:

Q. And you may lead this to somebody else, but you talked earlier about there were some discussions that were ongoing between NEET and also FirstEnergy about how the interconnection is going to be done. Were there additional discussions about whether shared facilities could be utilized along the route in any way where there's paralleling of existing Mon Power or PE facilities for distribution purposes?

A. So ---.

Q. Transmission?

A. Yes. We have requested from them initiated discussion of potentially using their construction access roads to cross their existing right of way or where they have existing construction access roads, so that we might access the facilities during construction or during operation.

Q. And were a transmission line --- you're wanting to put in a much larger transmission line than what FirstEnergy currently has in the same area in certain parts of it. Did you also discuss with them the possibility of having shared facilities or towers to accommodate both lines instead of just building a parallel line?

A. We did not.

ATTORNEY WILLIAMS:

Thank you. I think that's the only question I have at this time. Thank you.

CHAIR:

Ms. Wilson?

ATTORNEY WILSON:

Yes. I've got a few questions.

CROSS EXAMINATION

BY ATTORNEY WILSON:

Q. First, I was just curious. Attachment --- let me see. Attachment 2 to your Direct Testimony, you provide public out --- copies of public outreach materials. And in looking through that, I noticed it seems most of it was geared towards Maryland. Was this just intended to be kind of, you know, a sample of what you sent out or are there specific West Virginia materials and publications that you did?

A. We had materials that were similar across all states. We had additional publications that went out and those are noted in my testimony, which publications we submitted to West Virginia.

Q. Okay. But you didn't attach any of those to your --- to your Exhibit 2 for this application?

A. Which binder am I looking, Chris?

ATTORNEY CALLAS:

The big one.

A. This one? Can you direct me which tab that is, Chris?

ATTORNEY CALLAS:

It's --- it should be ---.

A. My testimony attachment.

ATTORNEY CALLAS:

Oh, okay. I'm sorry. It should be --- sorry about that, Ms. Wilson.

ATTORNEY WILSON:

That's okay.

A. So, yes. This is just an example of what was sent out. We sent a version of this for each of the four states that we crossed for the project.

BY ATTORNEY WILSON:

Q. Okay, thank you. Looking at page 27 of your Direct Testimony, and that's Bates page 1545, you indicate that PJM has requested that NEET MA work towards placing the MARL project in service as soon as possible and that MARL's now pursuing an accelerated pathway. Do you know when --- when you received notice that PJM wanted this project in service earlier than 2031?

A. PJM has consistently identified a reliability need for the region that begins in 2027 and has been working

with us to identify opportunities --- as we work to identify opportunities to accelerate and to bring this project in service as early as potentially 2029.

Q. Okay. And do you know what steps you --- you have taken in order to accelerate this project?

A. So we continue to work as efficiently as and expeditiously as possible through each of the regulatory proceedings, including working with land owners to obtain right of entry as we work through the process. In addition, we have worked to make sure that should we be able to initiate construction sooner, that all the equipment and materials will be procured and ready to go at that time.

Q. Do you know if the efforts to accelerate this project has led to mistakes and --- and filings and --- and, you know, pulling this project together?

A. Not to my knowledge.

Q. Your application, I believe, it's Attachment 1. You provide a preliminary permit matrix and that starts on Bates page 1562 or 1563 is where the chart starts.

A. Yes.

Q. And that --- that, you know, just kind of gives a little summary of --- of the status and, you know, when you intend to make filings and --- and the various jurisdictions. Are you aware of the --- the --- the

permitting status before other regulatory agencies in Maryland?
A. Yes.
Q. And what is the status of the product in Maryland?
A. We filed our application in January of this year and we have a procedural schedule in place that is working towards hearings next summer. Those are tentative. And then we anticipate a decision in the first quarter of 2028.
Q. Okay. Are you aware of whether there have been any issues with whether or not the application itself is complete in Maryland?
A. We have continued to participate in the discovery process as part of that filing and to work with the appropriate questions therein.
Q. Okay. But you're not aware of any specific issues regarding anything that may be missing or incomplete as part of that application?
A. We're continuing to work to provide the requested information as part of that proceeding, but that is on track.
Q. Do you know the status of the proceeding in Pennsylvania?
A. Pennsylvania has a two phase process. We submitted the application in Pennsylvania in March of this year.

We have a procedural schedule for the certificate of public convenience and a decision is expected in September of 2027. And then we expect within approximately a year following that to have a decision on the citing application which would follow.
Q. Okay. And are you aware of the status of the application in Virginia?
A. Yes, that application was filed in March of this year. We have evidentiary hearings in December and then expected decision in March of 2027.
Q. Okay. Let's see what else we've got here. Okay. So looking at page 29 and 30 of your Direct Testimony, and I believe that is Bates 1547 And 1548. You indicate that once the project has been constructed and it's in service, that it will be monitored by an affiliate in New York. Is that accurate?
A. That is accurate.
Q. Okay. Can I ask you, do you intend to hire any people in West Virginia to provide day-to-day maintenance and operation of the line?
A. It's our intent to hire support on the operations side in the vicinity of the project route. We do cross four states and the specific location where those individuals will be based out of has not yet limited.
Q. Okay. And can I ask you, you indicated that the

$133,000,000 in property taxes, that would be paid over the lifespan of the project?
A. Yeah. That's estimated over an approximately 40-year lifespan of the project.
Q. So about 40 years. So over 40 years, that averages to just a little over $3,000,000 per year in taxes for West Virginia?
A. That would be approximately based on the average. Sometimes taxes are calculated with depreciation and I don't have those numbers in front of me.
Q. Okay. Do you know if NEET MA has offered or offered to make any direct investments in West Virginia? Let's say perhaps like high schools or elementary schools or County Commissions?
A. We have not offered any of those specific direct investments.
Q. Is that something that NEET MA or its affiliates would typically do in areas?
A. Those are typically --- those are government entities that you had noted. We have made other direct investments as part of our giving to the community to support some of the local volunteer fire departments or other community organizations.
Q. Okay. Do you know if NEET MA intends to offer any specialized training to individuals that live in West

Virginia to be able to, you know, work in the future on or to help maintain these --- the line that runs through West Virginia?

A. There is not a formal arrangement, but as part of our broader community engagement and involvement, we typically look for opportunities to support the communities in which we do business, which could involve workforce development, STEM education, things like supporting emergency responders like those volunteer fire companies or other opportunities to partner.

Q. Okay. But as you sit here today, none of those offers have yet been made?

A. Not for workforce development.

ATTORNEY WILSON:

All right, thank you. No further questions.

CHAIR:

Okay, thank you. Now, we're going to turn to any Interveners that wanted to Cross Examine this witness. Okay, sir. Will you come up to the table with the microphone?

ATTORNEY CALLAS:

Your Honor, I have to note that according to my review of the responses to the Commission's next to last order, there was one unrepresented intervener who

indicated an intent to cross examine Ms. McCormick and that was Ms. Keiver. I have no others.

MR. HAYNES:

My name is Mark Haynes. I'm a landowner in Hampshire County and I'm representing my wife and I. We submitted written testimony. And to Mr. Callas' note there or notation, that was not my understanding of the Commission's order that interveners could sort of on the spot cross examine witnesses. So maybe been under a misunderstanding.

CHAIR:

Well, whatever your understanding of the order was, you may cross examine this witness.

MR. HAYNES:

Thank you, Madam Chairman and Commissioners.

CHAIR:

And would you state your name again for the record?

MR. HAYNES:

Yeah. It's Mark Haynes, H-A-Y-N-E-S.

CROSS EXAMINATION

BY MR. HAYNES:

Q. And hello, Ms. McCormick.

A. Hi, Mr. Haynes.

Q. Good to see you again.
A. Good to see you.
Q. So I have some questions about the landowners that are directly impacted or actually host these lines or are impacted but aren't hosting them. Okay? So my understanding is that 279 parcels in West Virginia are actually hosting these lines; is that correct?
A. Could you refer to me to a specific page of my testimony?
Q. It --- it was in --- it's in your most recent filing. No, I can't provide that information. That's your all's information, I believe, or NEET's information. And it's 143 in Hampshire, 44 in Mineral, 20 in Monongalia and 72 in Preston. So how long was it --- for how long, what period of time were the NEET land agents working to sign either options or purchases or rights of way? How --- what was that period of time?
A. That process was initiated in, I believe, August of 2025 following the selection of the proposed route.
Q. Okay. So over a year basically, they were working; is that correct?
A. That is correct.
Q. Okay. How many land agents were there?
A. I don't have that number in front of me.
Q. They were --- the company was out of Florida; is

that correct?
A. Our corporate headquarters are based in Florida. We work with a couple of different providers of --- for land agents. But there are also contract employees for NEET that work on the land team that are under Ms. Powers' team.
Q. Okay. My understanding, I think from counting what you all provided in your latest filing on the docket, is that out of that 279 parcels that are directly hosting these lines, that either --- that 85 of them either had options or easement agreements; is that correct?
A. I have not counted them today, but ---.
Q. I'm pretty sure that's correct.
A. Correct. And Ms. Powers, ---
Q. Yeah. All right.
A. --- yeah, her team have worked through that.
Q. And four of those were purchase agreements. And if --- if my math is correct, basically only 32 percent of those --- of the parcels impacted of that 279 actually signed agreements after more than a year of working by some team of land agents; is that correct? Approximately correct or correct?
A. That's approximately correct.
Q. Okay. Just anecdotally, NextEra apparently purchased at least some of these. And, again, it's

anecdotally we've heard or I've heard --- we don't know the exact amounts, but apparently some of those were very high figures that landowners were offered. That's not a question so much. But yeah, that's our understanding. So a question. The costs that NextEra pays landowners for rights of way are ultimately folded into the electric or electric ratepayers rates.

Is that correct? And so --- yes?

A. The cost for the project do include the cost for land acquisition.

Q. So no matter what cost NextEra or what price NextEra offers to landowners, it's ultimately born by the rate payers; is that correct?

A. Those costs are part of the total cost for the project and would be a portion of that.

Q. Also understand anecdotally that some landowners were --- at least some landowners were told on given --- being given fairly generous offers that unless you sign this agreement now prior to these hearings that we're having today that this offer will be --- will no longer stand after that; is that correct?

A. That is not what my expectation is. And Ms. Powers can speak to some of the specific messaging from our land owners.

Q. So you don't know whether it's correct or not?

A. That would not be correct. We're going to continue to negotiate with landowners following this hearing and through this proceeding and beyond.
Q. It just sounded sort of like a pressure tactic. So onto a somewhat different line of questioning here. NextEra really wasn't responsive to the question that I had asked and maybe others too in --- in my interrogatory. Not responsive to the question of how many landowners who or not hosting the transmission lines would be impacted that are within or would be within 250 or 500 or a 1,000 feet; is that correct? We really didn't get that answer. Do you want me to restate that or ---?
A. To --- to clarify, you're asking whether or not you received a number about the number of landowners within a buffered set of distances?
Q. That's correct.
A. I would need to look at the response that we ---
Q. Yeah.
A. --- submitted to you specifically on that. I do know that our routing study does include some information similar to that.
Q. Yeah. Effectively, what my interpretation of the answer was --- I don't have the verbiage right in front of me, but it was sort of figure it out yourself. So do

you know the answer to those questions though?
A. So I don't have that information.
Q. I mean, not personally right now, but does NEET know the answer to those questions? In other words, how many properties were within 250 to 500 to a 1,000 feet that were not hosting the transmission lines?
A. We could potentially calculate that information, but I do not know that that information has been calculated. Right now, we have focused on the right of way, the number of properties that are within the right of way, as well as anything within the adjacent siting corridor.
Q. Okay. Is it safe to say that some of those non or maybe many of those non-host landowners and their properties are also going to be impacted by the construction and presence of these lines?
A. Can you clarify what you would mean by impacting?
Q. Well, either visually, environmentally, property valuation wise, any of those or other impacts. You know, use your imagination, you know.
A. As part of our detailed routing study and part of the environmental analysis that was done to support the application, we carefully look at how to best minimize impacts throughout the siting of that line and the specific impacts and environmental considerations are outlined in detail as part of that filing and testimony.

Q. It's probably the case that the number of non-host landowners that are within --- you know, they're pretty close to these lines and some of them --- some of these are no doubt --- and you all never provided maps. But I'm just going to speculate what's probably pretty safe speculation that you're just skimming the property lines of some. And, in fact, my wife and I are of that class where it's right on our borderline. But the --- those numbers are probably more, maybe some multiple of the number of impact directly of those landowners actually hosting the lines. Would that be correct?
A. I don't have that information in front of me.
Q. But you probably know that somewhere because you have maps, right? But they were never released publicly.
A. I'm not sure to what maps you're --- you might be referring to.
Q. Well, maps showing actual parcels impacting.
A. There's maps for the project. And so each of the affected landowners has received a map as part of the discussions with the land agent showing their parcel relative to each ---.
Q. Yeah. The individual landowners, but not, you know, some map that is available to the public where the public could actually see the impacted parcels. And I'll just note that the Gore/Dobbs/Goose Creek, that FirstEnergy

did provide those maps. You can actually see the parcel numbers and the owners and whatnot, and that was, I think, very handy. But you all did not do that; is that correct?

A. The map on our website does not include that information.

Q. Why not?

A. The information that we have on our website and that we included, which we did increase the zoom on that map on the website in response to feedback from the public, does not include the parcel lines, but does include the ability to zoom in and view different areas, as well as to search by a specific address in order to view where a property may be.

Q. So it really made it very difficult for members of the public, such as myself and other landowners, interveners and whatnot to actually kind of figure this out. It was next impossible really.

ATTORNEY CALLAS:

Is there a question?

BY MR. HAYNES:

Q. Yeah, in a sense, yes. So is that correct? That's the question.

A. At our opening houses and throughout this process, we had team members who are available to help folks use

the website either on their personal device or to show them on one of ours how to look up their address and the map and to view where that was. In addition, via our hotline and our email address, we provided the opportunity for members of the public to send an email and to get specific maps and we provided a number of maps to members of the public relative to their parcels, so that they could get additional information.

Q. Can you deny that in some cases, the homes of the non-host adjacent landowners may be in fact --- well, may be significantly or may be, in fact, more significantly impacted than those directly hosting the line because their homes may be closer to the lines or some other valuable part of their property. Is this --- can you deny that?

A. As part of our analysis, we look carefully through the routing study, recognizing that the project will have some impacts. We looked at the opportunity to minimize those impacts while making sure that we hit the electrical need, trying to minimize impacts to the community on the environment and on property owners, and to avoid homes and businesses to make sure that they could still, at their structures and --- and places of --- their homes and their places of operation, continue to operate those businesses.

Q. Well, I --- I can't demand an answer, but that really wasn't responsive to the question. The question was, can you deny that there are some people --- so let me restate it a little bit. That there are people or landowners that are going to be very substantially impacted by these lines either economically, environmentally, visually, whatever, that are not indirectly hosting these lines; is that correct?
A. That --- the project has been carefully cited to try and minimize --- as I noted, there is an infrastructure project going in and that will result in some --- some impacts. But what we work to do is to make sure that we're optimizing the routing to minimize those impacts, recognizing that even parcels that are adjacent to the right of way have been considered as part of the siting and the routing of that, as well as the distance to residences and businesses. And some of those numbers and the relative distances to those types of things are outlined as part of our routing study.
Q. But still, that wasn't exactly responsive. So the question is are there people that, and maybe quite a substantial number of landowners, excuse me, that despite the fact that they're not hosting the lines, will suffer impacts, either economic, environmentally, visually, from these lines?

ATTORNEY CALLAS:

Your Honor, I'm going to object. This is the third time we've heard this question.

MR. HAYNES:

Well, I've never gotten a response.

CHAIR:

Ms. McCormick, you can try to answer one more time.

A. As I have noted and is outlined in our routing study, we have taken into consideration as well feedback that we've gotten from the public, from the communities. We had over 1,500 comments that came in via a number of channels, including our open houses, a survey on the potential route, stakeholder meetings and engagements, as well as submissions to the hotline and the email address to consider the impacts, not just to potentially a route or an area, but to understand holistically the concerns in an area. And then we have worked to minimize those impacts as a result of the routing study and recognize that there are a number of concerns and questions that people have raised relative to --- to the project. And we have worked to outline and minimize those concerns as part of the routing study and then the environmental report that accompanies that.

BY MR. HAYNES:

Q. Okay, I surrender. Is it correct that those landowners who are not directly hosting these lines, there is --- I mean, it's undeniable. There are going to be people that are not directly hosting the lines that will suffer consequences from these. Are those landowners receiving any just compensation or any kind of land compensation at all from NextEra?
A. We are working to provide an option and then an easement agreement with everybody that is within the right of way. We continue to work with landowners who have any concerns or questions, and would welcome any feedback that we get from any of the members of the public to the hotline or the email address to work with them on any specific concerns that may be relative to their properties.
Q. But what I'm hearing, I think you're answering, is that no, basically those landowners that are impacted that are not directly hosting the lines are going to receive no compensation; is that correct?
A. Those individuals that are located outside the final right of way do not enter a new agreement with us.
Q. Yeah. So that's just, I guess, one way to put it is that's just the way the cookie crumbles. But I want to ask a personal question. Do you think that's fair?
A. Each individual that has facilities on their

property, every individual has property owner rights for each of their properties and the ability to --- to work within that. And so we work with each of those individuals to make sure that we're working with them based on their specific property in the area of --- of easement that we're working with.

MR. HAYNES:

Okay. So I think the answer is no, those people do not receive compensation. And there's many hundreds of them. So that's all the questions I have.

CHAIR:

Are there any other interveners who wish to cross examine this witness?

MS. GRUBER:

I would like to cross examine. My name is Kristi Gruber.

CHAIR:

I'm sorry. I can't ---.

MS. GRUBER:

Oh.

CHAIR:

Okay.. Go ahead and proceed.

CROSS EXAMINATION

BY MS. GRUBER:

Q. So when the land folks came around ---.

CHAIR:

You're going to have to speak into the microphone a little bit better.

BY MS. GRUBER:

Q. When the land men came around and talked to us about what the plan was, they talked a lot about blasting. So as they're blasting, that can have a lot of damage. I'm following up on the previous cross examiner. And when that happens, that affects a lot of area. So do you have any kind of plan for dealing with immediate impacts to the adjacent landowners or the right of way landowners that can deal with their well or can shake their house or what is the plan to fix immediate impacts? Do you have anything in --- in line or are these landowners expected to just go without a well, have a poisoned well, or have damage to their homes and have to move out of their homes? And what happens at that point?

A. Mr. Givens can speak in more detail to some of the construction methodologies. Typically, blasting is only used if necessary based on specific geotechnical conditions and based on if there is a need to blast, there would be a specific blasting plan where each of these would be considered. And Mr. Givens, as our engineering expert, could comment in additional detail on the proposed construction methodologies.

Q. So to your knowledge, you have not put together a plan to manage any damage that would be done to people's --- to the, as he called it, the hosting landowners or the adjacent landowners?
A. If blasting were needed, presuming that is ---.
Q. Let's --- let's --- take blasting out of it because you didn't really know. So, I mean, he talked blasting my personal property. But any --- any damage that would be done, say a truck comes in, the concrete truck damages somebody. Do you have some plan in place and money set aside to fix that immediately or are the landowners expected to take on that --- that repair with no compensation?
A. As part of our construction process, there's a site restoration component and if there were any impacts to a property or even through the part of our road use agreements to use public roads, we would repair any of those impacts or restore that to the --- to the landowners and the pre-construction condition.
Q. How long does that process take? What does that process consist of?
A. So during the construction period, we will still have some of the --- the land team available who is the first line of contact for any of the landowners within the right of way. They would be available to identify

and flag any concerns to. And then we would work with our construction team to address any of those concerns. Mr. Givens or Ms. Powers could walk through any of the specific additional details of those processes. But it is our intent to restore those properties and those construction areas following construction.

Q. So you're saying that you will have a team on call that if there is damage to a roadway, you'll have that immediately fixed? It's not going to be a process of two or three months that takes --- or you're going to wait to the end of that right of way area and then come back and try and fix things? I mean, are people going to be put out by this whole situation? Like I said, if there's damage done to my well, is that going to be fixed in the --- in a day, in two days, or am I going to wait for three months to have my well fixed, in which case, I can't live in my house.

A. We will work with each of the individual landowners to understand any of their specific concerns. And so if there was a concern related to --- to well water or well quality, we'd work with that individual landowner, recognizing that the water is a high priority in any household to understand what the concern was, what the potential origin of that, and should anything --- there be anything that we should do to step up, we would

promptly work to make sure that that was being taken care of.

Q. So it sounds like there's no plan in place to manage any impact to either the right of way areas or the adjacent areas. Would you say that's correct?

ATTORNEY CALLAS:

I'm going to object to the form of the question. That mischaracterizes her testimony.

MS. GRUBER:

Apologize. Let me rephrase that.

BY MS. GRUBER:

Q. Where can we see this proposed site restoration process? Is that written document anywhere?

A. We have not yet prepared a restoration document, but that would be --- once we bring a construction contractor on board, we would work to make sure that we have some of those procedures specifically outlined. And can --- would work with each of the individual landowners to identify their concerns and what's happening in the field that they may have questions about. And then we would work to restore those conditions to allow safe access and to understand any other concerns that may exist.

Q. So in your cost estimates, none of that has been included in there; correct?

A. Site restoration is included as part of the cost,

included in our cost estimate.
Q. Do you know how much that is? Can you tell me that?
A. I don't have that specific number broken out. It would be included within the general construction costs.
Q. Is there someone that can provide that document?
A. Mr. Colley outlined some of the specific cost breakdown as part of his testimony.

MS. GRUBER:

Thank you. I believe that's all I have. Thank you.

CHAIR:

Thank you. Commissioner Larrick.

COMMISSIONER LARRICK:

I have no questions.

CHAIR:

Commissioner Raney.

COMMISSIONER RANEY:

Yes, ma'am. I have some questions. Morning, Ms. McCormick. Nice to see you.
A. Good morning.

COMMISSIONER RANEY:

I'm going to go through your testimony here and ask questions, so bear with me. And I promise the Chairman, I won't jump around too much. Try to --- not to repeat myself. First of all, you mentioned right

at the outset the team. You mentioned the team several times. Who is the team?
A. So we have a group of experts between engineers, environmental staff, communications support.

COMMISSIONER RANEY:

So support all employees of NextEra?
A. Employees, and then some additional consultants such as Ms. Heater, who is the Routing Consultant and speaking ---.

COMMISSIONER RANEY:

Are the two witnesses from PJM that are testifying on your behalf part of the team?
A. They are part of the entity that awarded us the project. And so while they --- we have a contract with them, they are functionally more of our clients on this as part of the day-to-day team.

COMMISSIONER RANEY:

Okay. Overall question. Do you anticipate needing eminent domain before this thing finally gets settled?
A. It is always our goal to make sure that we come to a voluntary agreement with individual landowners as we work with them throughout the proceeding. And as a overall company --- Ms. Powers can support speak to the numbers, but typically we have over --- over 95 percent of

landowners voluntary work through it. And I believe the number is actually slightly higher based on our past projects.

COMMISSIONER RANEY:

So 95 percent of the people that Mr. Haynes referred to as hosts have agreed to whatever it is that's necessary for the line to go through or over their property?

A. That is based on our past projects, typically what we would see. We have not yet gotten to that point on this proceeding.

COMMISSIONER RANEY:

Okay. So that's a historical number and one you hope to achieve here, but not --- you have not yet achieved that?

A. Correct.

COMMISSIONER RANEY:

You guide me to someone else here, but I've struggled with this from the very outset. And you can help me out with the initial bid amount somewhere around $600,000,000, as I recall.

A. Correct.

COMMISSIONER RANEY:

And now we're all of a sudden looking at doubling of that amount. How does that process work?

And --- and allow me to just do the explanation of why I'm struggling with it because most of the time I see bids offered and usually it includes everything, as much as you know at that particular point in time. And it just seems unusual to me that you --- you have an initial estimate which got your bid awarded and then the first thing that happens is we double the amount. Help me out here. How do we get to that point? Something seems askew to me as it regards that.

A. So Mr. Colley outlines all of the specific costs and the breakdown of the costs and how we got to that piece and I think he'd probably be the best person to --- to walk through that in specific detail with you on how --- how that cost has been ---.

COMMISSIONER RANEY:

I'll do my best to try to remember ---

A. I think he's up next.

COMMISSIONER RANEY:

--- to ask Mr. Colley when he shows up. You mentioned, Ms. Wilson mentioned, I think the gentleman Stephens mentioned $133,000,000 property taxes over 40 years. That's $3.3 million per year, which means that simple math that each county is going to get about $800,000 per year in increased property taxes that they are not today getting.

A. That is ---.

COMMISSIONER RANEY:

And I'm not asking you to say my math's right. I'm just asking you conceptually, is that ---?

A. Conceptually, yes. There would be the additional tax as a result of the capital investment in each of those counties.

COMMISSIONER RANEY:

Now, does the assessment of the property on which you will have standards, is that what's going to impress. Is it because it becomes industrial property as opposed to farmland property?

A. So the caveat that I'm not a tax expert, but that is based on the capital investment, and so the additional equipment investment within the right of way that is taxed.

COMMISSIONER RANEY:

Okay. Now, who pays that property tax?

A. My --- so I don't have all that information in front of me at this time, but my understanding is there is a component of that that comes from us into the state that is then distributed to the counties.

COMMISSIONER RANEY:

So you will become --- thinking you become a utility for the lack of another term. And that

particular portion of this right of way through West Virginia, that property tax will be paid by you, not by the landowner on which it's situated. Is that ---?
A. Again, I'm not a tax professional, so my understanding is, is that for the capital investment, that comes from us. With regard to the specific land area, I don't have that information in front of me.

COMMISSIONER RANEY:

Okay. Does any of your witnesses, would they be able to more specifically articulate that?
A. Mr. Boykin may be able to answer that question.

COMMISSIONER RANEY:

Okay, all right. All right. Let me see here. I see somewhere here --- I'll yield that question to Chairman --- I'll yield that question to you, Madam Chairman.

CHAIR:

Okay.

COMMISSIONER RANEY:

On --- on page eight, Bates 1526 of your Direct Testimony, you mentioned in lines 18, 17, 18, 19, talk about other states in which you've done business. Have those projects been similarly handled as it regards the amount of money that was in the initial bid and what the ultimate bid was? Do you see a doubling of that

typically from the initial step to the --- to the ultimate step?

A. I was not personally involved in any of those other proceedings and I couldn't speak to that.

COMMISSIONER RANEY:

Okay. On page ten, you talk about the financial qualifications of your company. If you're unable to recover the cost of the West Virginia portion of MARL, will it be --- will it be constructed?

A. I don't know that I could speculate as to the answer to that question. Presumption is to recover prudent cost ---?

COMMISSIONER RANEY:

Does anybody know the answer to that question?

A. I would say that it's a bit speculative from that perspective. I --- I don't have that answer in front of me.

COMMISSIONER RANEY:

Based on your experience, if West Virginia doesn't allow the recovery of cost, will Pennsylvania, Maryland and Virginia pay for it?

A. I couldn't speculate to that.

COMMISSIONER RANEY:

So each case is specific is what you're

saying to me, I guess. Is that ---?
A. Yeah.

COMMISSIONER RANEY:

Okay. Page 19 of your Direct Testimony talking about the Woodside substation that's going to be constructed. It's not currently in place. Am I correct in that?
A. Yeah. The Woodside substation is a new substation that will be constructed in Frederick County, Virginia.

COMMISSIONER RANEY:

What happens if it isn't constructed?
A. That substation is currently working its way through the required local approvals and is expected to start construction in late first quarter of next year.

COMMISSIONER RANEY:

Will the witnesses from PJM be able to talk to me about if --- if it should not, for whatever reason be constructed, that what impact that might have on the MARL line?
A. They would be best poised to answer questions on the electric systems modeling.

COMMISSIONER RANEY:

Okay. Page 22, you talk about --- this in your Direct Testimony. Talked about discussions with PJM and incumbent transmission owners and using existing

right of ways. And I know throughout your testimony and others, you've talked about one of the priorities is to use existing right of ways. Tell me what that means from your perspective as New Era (sic). What --- what is existing right of way? Because you don't own anything here now, right? NextEra doesn't own anything in West Virginia as we speak.

A. Correct. Our testimony outlines our working to parallel and abut where it is feasible, existing transmission infrastructure or other linear infrastructure, so that we can minimize potentially some of the fragmentation of habitats, keep those facilities consolidated. And a lot of that is outlined specifically with regard to paralleling within our routing study.

COMMISSIONER RANEY:

I see, okay. Well, I asked it specifically and I happened to stop at a farm in Fort Ashby between the hearings and Romney and Keyser and there was an existing power line on this farm and it was done years and years ago. The current owner's father negotiated with, I guess it's a FirstEnergy line. I think it is, if I recall correctly. And I think they asked the question is can you not just bring this line in here and --- and run it right alongside this old FirstEnergy line that's going to be supposedly

deactivated at some point? And they were told by whomever, and I don't know who that was, said no, we can't do that because they're in competition with us. Can you --- can you clarify that in some way that I could better understand what they were talking about?

A. So what I would say is that we can't take our transmission line and necessarily put it in someone else's right of way. Each of those right of ways is set based on the voltage and the specifics of that line to adhere to the safety and operational standards to make sure that that is operated safely. We can't overlap necessarily our right of way with theirs because we want to make sure first and foremost that we're safely operating that line, whether that's line workers or others coming out there, that we're adhering to all of those standards. And so based on that, we need to make sure that we have the appropriate offsets to our line and that they're still continuing to have the appropriate offsets for their line.

In addition to working --- working through all of that, you know, we --- we can't --- we can't control what's happening in their --- in somebody else's space. And so what we want to do is make sure that we're operating there. In addition, there's many challenges if you were to want to take one of those other lines out of

service, which are critically needed to help serve power throughout the region, that could also pose things. And so this line also provides a redundancy from that point, which is outlined in testimony of Dr. Abdulsalam.

COMMISSIONER RANEY:

So when --- when you talk about existing right of ways and utilizing them, and --- and I use --- I'm not talking about you, Ms. McCormick, individually. I'm talking about conceptually with NextEra. You're talking about putting them beside existing right ways. Is there a 200 foot or a 300 foot or is there a maximum minimum amount that you --- you can get close to an existing right of way?

A. So our goal is to where one right of way ends for another line would be for us to abut, so that our right of way ends at that same point so that you don't aren't left with, where we're able to, anything in between those two. Now, based on angles and where you're working towards, sometimes that is not possible. Or in many cases, there may have been a home or businesses that we're seeking to avoid and then we deviate from paralleling.

COMMISSIONER RANEY:

When you talk about abutting, I'm presume you're talking about linear linkages. Now, what about

adjacent linkages? You know, I've got a line running here. Can I --- can you run your line over here?

A. So, yeah. So you would have --- say you have an existing line, hypothetically, saying that they have 100 foot wide of way. So 50 feet on either side of the line.

COMMISSIONER RANEY:

Okay.

A. We're looking at a 200 foot wide right of way. So you would have 100 feet on either side of our line. So you would want our 100 feet and their 50 feet, you would want them linked up so that there's 150 feet between the center line of the two lines. So that they have their 50 feet and we have our 100 feet.

COMMISSIONER RANEY:

So I presume that people that have a current right of way on their land are probably a little easier to deal with since they have had it on their land for a while. And --- and I don't --- easy isn't the right term. I'm talking about, at least in their minds, they've had this right of way and they've dealt with it. So it's nothing new to them. Is that --- is that accurate?

A. I think each of the landowners and probably the folks in the room today would say each landowner is different based on their experience and their

considerations and concerns on their property. And we work to really carefully try to make sure that through our --- our agents and through our team, we're working to try and understand their specific concerns and considerations and work with them on an individual basis.

COMMISSIONER RANEY:

Okay, all right. Page 25, I've done. I've done that one. On page 32, which is Bates 1550 of your Direct, you talk about alternative route A of the five, I think, alternatives. With all the changes that have occurred since your initial testimony, which I guess was done in January or early this year sometime, is alternative route A still generally in place? I mean, is that your preferred route?

A. Yes, that's correct.

COMMISSIONER RANEY:

Okay. It hasn't changed?

A. There have been a small number of route revisions that have been submitted before this Commission that are included within that and we have submitted those before you.

COMMISSIONER RANEY:

Right.

A. Supplements.

COMMISSIONER RANEY:

Okay. But that hasn't changed the general direction and concept of alternative A?

A. Correct.

COMMISSIONER RANEY:

And I understand that you all have as raises the Lake of the Woods (sic) people and adjusted the direction or turning or whatever it was you all talked about that pleased them and pleased you. Is that --- that doesn't change alternative A other than moving it from one point on their property to another point on their property?

A. We worked with Lake O'Woods based on some of their specific concerns and then we've had continued meetings with them. And so we have worked to identify an option that keeps the permanent right of way on their property, but does make some adjustments to avoid some of the environmental constraints that they outlined in their testimony.

COMMISSIONER RANEY:

Okay. On page 33, and I just need a little education here, on line 6, 5 and 6, you said, however, in those areas that may require aerial easement blowout. What --- is that a term that's --- that you all use quite a bit? Because I'm --- what is aerial easement blowout?

A. So typically when we talk about a right of way, that on the ground, that 200 foot area. In certain areas where you have longer spans or other site specific constraints, there are areas where in, say there's an extreme wind or weather event, where you may have potential for the --- the line to shift, blow in the wind. And Mr. Givens can probably give you a better technical explanation. We make sure that we accommodate any of those scenarios. And so there's additional --- an additional aerial easement in those areas to make sure that we are taking care of anything that may be in that additional area. For example, if there were a reason, there were trees or something there, that that is --- that is maintained and that that is recognized. And there's a limited number of areas where those are in place.

COMMISSIONER RANEY:

And that's why you asked for flexibility in all of this, in the location of the right of way. I mean, in the next sentence, on line seven, you --- you ask for flexibility in your testimony and I presume that's the basis of asking for that.

A. It's that, as well as there's times when you may identify something either during or up to construction as you advance design that may result in wanting to adjust a

structure location or shift something. So we've requested the siting corridor in order to accommodate any of those normal and customary changes that may occur as you work through the --- the final engineering and work into construction.

COMMISSIONER RANEY:

So that'll be specifically laid out in the ultimate final plan as to what flexibility means, at --- at this point you want this and at point B, you want this, as opposed to expecting us to just give you a general hand flexibility in --- in post decision?

A. The siting corridor that we identified is included on all the drawings and the maps that are included in there.

COMMISSIONER RANEY:

Okay, all right. Thirty-Four (34), we answered that one. You answered the eminent domain question I had. All right. Now, I go to your Rebuttal Testimony.

A. Okay.

COMMISSIONER RANEY:

And on page 4 and page 5 of your Rebuttal Testimony, beginning at lines 19 on page 4 and ending with lines 4 on page 5, you talk about Mr. Egnatoff's testimony as it regards a dwelling that is located

between within right of way corridor, and that you've been working with them to try to move that --- that dwell --- dwelling or structure. Has that been done? Is that finished ---

A. We have ---.

COMMISSIONER RANEY:

--- with the landowner?

A. Yeah. We have entered into an agreement with that landowner and provided the compensation. That individual still has time to work on that adjustment until we closer to construction. But yes, we have come to agreement with that landowner.

COMMISSIONER RANEY:

You've come to an agreement, but the structure has not been moved yet or whatever the ultimate ---

A. Correct.

COMMISSIONER RANEY:

--- resolution of that is? Okay. Madam Chair, I'll get through this here in a minute. On page 9, beginning on line 13, it said these changes may be identified by an external landowner or internal party. Who or what is the internal party in a --- in a broader technical team of subject matter and the electrical requirements from PJM, tell me all about who and what all

that is. It's talking about the route revisions.
A. So an internal party could include somebody on our engineering team, an engineer, ---

COMMISSIONER RANEY:

A NextEra employee?

A. --- a NextEra employee or a consultant on our team that has identified a consideration that we need to take into --- into consideration. And so from there, as part of our route change process, then that is --- is brought forward to a broader team of subject matter experts to evaluate its feasibility. So that would include engineering, the land team, environmental, the project execution team that I'm part of. And we all take a look at it through our various lenses to come together to understand whether that is something that --- that can or should be implemented. And if one is accepted, then that is --- is brought forward.

COMMISSIONER RANEY:

I see, okay. Well, we talked about flexibility, what that means. That --- this perhaps --- and I'll ask Mr. Deskins when he comes along on Wednesday, but have you all considered the economic impact of what --- many landowners I've heard at the public hearings and others worry about the diminution of their property value. Has that been considered in any of

this economic benefit cost analysis that's been done?
A. Mr. Deskins did that specific analysis and so we've looked at a number of things and I --- he's best to answer that specific question ---

COMMISSIONER RANEY:

Oh, I'll ask him.

A. --- on the factors that he considered.

COMMISSIONER RANEY:

Yeah. I didn't see anything in his report. It talked about the diminution of value, but we can talk about that on Wednesday, so. Woodside, we talked about that. And that's a PJM --- you said to talk to the PJM fellow, if Woodside doesn't get built, what happens?
A. Yeah. I can't speculate with that. We're working towards construction next year.

COMMISSIONER RANEY:

Okay. On page 34, which is Bates 40, your answer to --- to the question, Mr. Egnatoff, about requiring NEET MA to file evidence it's obtained all the environmental permits. Your answer said it's obtained any necessary environmental permits. Would you object to answering that with any and all environmental permits that are necessary before you expect this --- this Commission to answer the question as to whether we agree

with you or not?
A. I'm just reading the condition.
COMMISSIONER RANEY:
Take your time. That's --- that's fine.
A. I think that this would be okay to add any and all. You're talking about is the underlined piece at --- the underlined piece, it looks like this is at line 17 and 18, where it says with any applicable federal, state or local?
COMMISSIONER RANEY:
I would say require NEET MA to file evidence it has obtained any and all necessary environmental permits, and or completed, yada, yada, yada.
A. Yeah.
COMMISSIONER RANEY:
And --- and that takes me to your table. That's the page one of four in your Rebuttal. And --- and I presume there is an underpinning here of coordinating with DEP, NPDES, Corps of Engineers, the Fish and Wildlife Service, everybody that --- to get a permit to mine coal in this state, you got to check with a whole bunch of folks and I'm figuring you need to check with the same bunch of folks.
A. Correct. We need to check with quite a number of

agencies at the state, federal levels.

COMMISSIONER RANEY:

Okay.

A. They're outlined in the --- the permit.

COMMISSIONER RANEY:

That's all going to be coordinated and done before ---

A. Correct.

COMMISSIONER RANEY:

--- you expect anything out of this Commission? Is that ---?

A. We ---.

COMMISSIONER RANEY:

I have a pretty good feel about what's going on, huh.

A. So we are continuing to coordinate based on the timing and sequence of them. So some of those continue at a latter point. But they would all occur ahead of construction. But they --- those proceedings may not have concluded until a latter portion after we've received or worked through this Commission's process.

COMMISSIONER RANEY:

All right. And I go to page three of four of your --- on your table at the end. And your number ten --- or I guess Mr. Egnatoff's number ten condition is

require NEET MA to utilize existing right of ways for the project and its support facilities wherever possible. And you disagreed with that and offered no alternative. I mean, was there a reason for that? And perhaps that was in your Rebuttal and I missed it, but ---.

A. So you asked me the question earlier about why we could not overlap those --- those right of ways with regard to making ---.

COMMISSIONER RANEY:

So this would be the same thing then where ---?

A. Correct.

ATTORNEY CALLAS:

For the --- for the record, Commissioner Raney, pages 30 and 31 of her Rebuttal Testimony address this very point.

COMMISSIONER RANEY:

Okay. Well, I apologize for having missed that. So that's --- thank you for that.

The previous questioner of you talked about blasting and water well damage and --- do you understand that there's any bonding --- do you have any bonding requirements in this at all to bond that you are going to perform according to what your plan says and should there be damages, then there --- there is an

opportunity for someone to come back and have assurance that you've got bonding that's going to take care of them should that damage occur?

A. That is something that can be and has been in various proceedings required as part of a --- one of the other, for example, as a road use agreement or some other type of approval. We're still working through those processes and some of those would occur at a --- at a latter date, but those could potentially be ---.

COMMISSIONER RANEY:

Do other agencies require that, do you anticipate?

A. It would depend on specific agency and what they were looking to. I --- I don't have any specific for this proceeding at this time.

COMMISSIONER RANEY:

And I presume or when you go into these and you get a --- when Mr. Haynes talks about a landowner host, and I take that to mean that the wire is either going to be above them or on them or standard or something that's very, very direct. I presume you do basically baseline surveys as it regards the condition of their property before you do anything? The condition of their water, should it involve their water, or a stream. You do baseline surveys so that you know what you've got

to get back to?
A. So we will have done baseline environmental surveys to look at these, as well as there's some pre-construction civil boundary surveys that we do ahead of that, as well as visual inspection as they're working to get out to do the construction. And Mr. Givens can talk about their pre-construction process in --- in more detail. But we would work through that and then based on the specific nature type of the project, we --- then we look at other ---

COMMISSIONER RANEY:

Yeah.

A. --- other types of material.

COMMISSIONER RANEY:

Good. Thank you, Ms. McCormick.

A. Thank you, Commissioner.

COMMISSIONER RANEY:

Appreciate your patience and your patience, Madam Chairman. Thank you.

ATTORNEY CALLAS:

Madam Chairman, Madam Chairman, I've been informed that there is one other intervener that has questions based upon her testimony.

CHAIR:

Okay. We're going to take a ten-minute

break and when we come back, we'll do the intervener. I have a couple questions and then we can have Redirect. So let's take a ten-minute break.

SHORT BREAK TAKEN

CHAIR:

It's my understanding that we have two more interveners who wish to cross examine the witness. So will the first one please raise his or her hand.

Okay. Will you make your way to the microphone here at the table?

ATTORNEY CALLAS:

Right here, sir.

MR. EVANS:

Yes, ma'am. Can everyone hear?

CHAIR:

Speak a little bit closer to the microphone. Is the microphone on? Okay.

MR. EVANS:

How about this?

CHAIR:

Okay.

MR. EVANS:

Does that work?

CHAIR:

Yes.

MR. EVANS:

Okay.

CROSS EXAMINATION

BY MR. EVANS:

Q. My name is Kevin Evans. I'm a landowner. I'm a hosting landowner. And Ms. McCormick, I have a question for you. And Mr. Commissioner Raney joggled my mind when you were explaining about rights of ways and how close they put them or far away or whatever. But on my property, my property, half of the existing power line is my property. So I have half of a power line already on my property. And then I took the center line of that and measured 75 feet, which gave me the edge of the existing power lines right of way. From that point to my house is 241 feet. That means there's only 41 feet left over. In the section I'm in, when I went through the --- the maps at the library, I saw that they had all these different routes, A, B, C, D, E, F. But when it gets to my house, all of them go through one place. So is 41 feet from my house the best that I can hope for?

A. So our routing study worked through all of the specific constraints and considerations in various areas. And there are a couple of points where there's a little bit of a bottleneck, but that is the optimized route that we have in that area at this time. If you've not had any

of our agents out your property, we'd be happy to send somebody out to come specifically walk your property with you if you'd like.

Q. I had an agent to my place and told him and I tell y'all that the --- the very best choice for me is for everybody just to pack up and don't bother me anymore. But if that's not going to be the case, then, you know, they've made some offers, but they're not to put me out of my retirement home and that kind of thing. And the --- the --- I tend to get tongue tied in front of people, but don't want to lose my thought. But he has --- but the best they've done is to make wanting me to sign any option for them to buy, which means that it still could go through. They still could ruin land and the environment and I'd still be stuck there with what's left for a little bit of compensation that's not nearly --- but anyway, it's just --- it's been devastating for me and my wife. And also I have neighbors, too, who the power line might not be going directly through their property, but they're very, very close to it and it affects them too. But anyway, 41 feet, it just --- I don't know. Would you feel comfortable living that close to 500k power line?

A. Forty-One (41) feet from the edge of the right of --- from the edge of the right of way, ---

Q. Yes.
A. --- you know, we have a number of folks on our team who live proximal, too, and I would feel comfortable living safely outside of the right of way.
Q. Yeah. Well, it's really --- it's really encroaching and it's --- yeah.
A. Yeah, yeah. I recognize that, you know, outside of the right of ways appropriate for residents --- and I --- I hear you. I recognize your concerns and we appreciate your feedback and the --- to the company and, again, happy to have our agents come out.

MR. EVANS:

Yeah. Well, he's been there several times, but they don't --- an option is the best thing that they've done for me and I --- I can't do that tie up everything, which is no guarantee of buying anything. So, that's all I have.

CHAIR:

Okay, thank you. Next intervener who wanted to question?

CROSS EXAMINATION

BY MS. EVANS:

Q. I didn't realize I would be following an Evans, but I'm Sarah Evans and I'd like to say we already have a right of way with FirstEnergy, Potomac Edison for a

transmission line on us. So I know what it's like to have one. When I hear him say I really don't want to live that close, I ride horses on our land and it's easy to hear it and sometimes you feel the static very near it. So I don't know that I would want to have my house next to it either. So --- so just comment on that.

So we already have the right of way, like I said. And I want to verify when you said about abutting up to a right of way. I'm like here's --- the best I can do is illustrate. Here's a right of way. There's a line in the middle of the transmission line right of way and our right of way that Potomac Edison or FirstEnergy has cleared, it has absolutely no trees and then we have woods. If NextEra comes through and their right of way abuts to that, they will take those trees plus whatever for their right of way, which would be all the woods would be gone. So is there a place where there's like no man's land or where nothing can come between the two? You can't build anything in that? All the trees are gone. So we have a right of way for FirstEnergy and a right of way for NextEra. So I guess clarify for me, how much space are we actually losing here? How many trees are we losing? That's one question.

A. I don't have your specific property in front of me, but if --- you have an existing right of way.

A. Yes.
Q. Just for math purposes, we'll call that 100 feet. So there's 50 feet on the side of that has been cleared from the center line over. If we have an additional right of way, our goal, when we can, is to parallel and abut, so the edge of our right of way hits the edge of that right of way. If that were the case and we were able to abut in that location, there would be no --- no strip of land left in between the right of way. That would all be maintained right of way and those structures would be permitted in that. There are cases in which there may be we're --- we're turning or otherwise angling to accommodate other structures where there may be some additional land or area that remains in between those areas.
Q. Okay. That answers that question. And then my other question --- and this came listening to the questions that have already transpired. You purchase a right of way and we would have three towers on us. So when they're saying you may need additional space or wiggle room to put those towers, if you are outside of that right of way and you have already purchased that right of way, does that mean the landowner eats that cost? What happens to that property that, I guess, no longer can be used by us because the towers will now take

up that or wires to hold them? So help me understand that.

A. Let me know if I don't fully answer your question ---

Q. I will.

A. --- but my understanding is that you're asking what would happen if there was a shift or an adjustment to the tower, the --- the right of way. We would work with the landowner on a specific agreement to document that easement and that change, if there were hypothetically to be a change, to work with that landowner and to work with them, if there is additional right of way, to work with them on any necessary agreement and --- and affiliated compensation for them.

Q. Okay. And then my final question is, according to a map in the library --- we were not told by a land agent nor did this show up in any contract that we saw, that on our land, there is going to be, and I'll call it a lay down yard where they would come in and put down supplies. Do we get paid for that? Do we compensated for that? Because where that yard shows on that map, trees will have to be cut. And, again, that's a loss for us. So help me understand that.

A. We've not finalized any of the temporary lay down area, but there may be areas to support construction that

are identified. We would work with each of the individual landowners on the agreement for that temporary workspace, as well as the permanent workspace.

Q. And also roads being built into it then?

A. As well as any potential access that we ---.

MS. EVANS:

So, there's a lot of potential damage and funds that aren't even addressed to begin with by any land agent. So, thank you for answering my questions.

CHAIR:

Thank you. I have a few questions. On page six, Bates 1524 ---.

ATTORNEY CALLAS:

Direct?

CHAIR:

Direct. You state if the Commission grants NEET MA's requested CPCN and NEET MA constructs the West Virginia portions of the MARL project, NEET MA will transmit electric power and energy portions through --- or through portions of West Virginia as a public utility. Now, it's my understanding that you have filed a motion asking us to declare NextEra a public utility, but we have not done that; is that correct?

ATTORNEY CALLAS:

That's not --- it's --- it's correct, but

not precise in that we have requested in the application that upon the issuance of an order granting certificate, we be determined to be a public utility at that point, but not before.

CHAIR:

Okay. And we have not called it a public utility yet?

ATTORNEY CALLAS:

No.

CHAIR:

Okay. Now, going back to your rights of way. Are there certain restrictions on what can be done in those rights of way? For instance, can cattle be there? Can crops grow there? Can you mow under them? What --- what can be done by the landowner who has a right of way through his or her property?

A. Within those rights of way, other than the specific footprint of the tower, transmission towers, you can continue agricultural practices. So that could be pasture land, that could be row crops, that could be corn, that could be hay. All of that remains available. It's also available for --- for recreation as people are, you know, are out walking, hunting throughout the area, but those structures are permitted.

CHAIR:

Do you have a standard for which a home can be or should not be closer than a certain number of feet to your rights of way as relates to noise?
A. There is not to my knowledge and Mr. Givens may have additional context. There's no specific distance in terms of --- of feet between any of that. We work to keep those structures outside of the right of way.

CHAIR:

Well, have you determined how close one can get to the tower or the line before you hear noise?
A. I don't have a specific answer to that question. I know we've got Dr. Ollson, who's a noise --- comment on some of the noise, but I think that is variable.

CHAIR:

Okay. My last question is in Florida, NextEra paid a substantial settlement because of irregularities of what NextEra was doing in Florida. Could you expound upon that for us, please?
A. The frame of my work is not within in Florida, so I don't have any specific.

CHAIR:

I'm sorry. I couldn't hear your answer.
A. I was not involved in that part of the business and I --- I don't have any context to add on that. I can't comment.

CHAIR:

Are --- are there any of the witnesses that are going to be presented for NextEra able to answer those questions?

ATTORNEY CALLAS:

I think we ought to let the witnesses determine that when they get more context from you if you ask the question of them. I'm not exactly sure what you're referring to.

CHAIR:

Well, there was a news release that said that NextEra paid, I don't know, $135,000,000 to settle allegations that it was involved in illegal activity in Florida relating to lobbying and other issues.

ATTORNEY CALLAS:

And the question is --- about that is what?

CHAIR:

Well, the question is what did NextEra do or what have they admitted to doing or what were the allegations?

ATTORNEY CALLAS:

Okay. Would it be appropriate for us to provide you with any public information on that topic?

CHAIR:

That would be appropriate, yes.

ATTORNEY CALLAS:

Okay. We'll --- we'll work on that, Madam Chair.

CHAIR:

Okay, thank you. And I believe you testified that somebody else is going to be better qualified to tell us how a project went from $600,000,000 to over $1,000,000,000.

A. Mr. Colley testifies to the specifics of how the costs were adjusted and updated as we work through the refinement of the project and the specific design of the facility.

CHAIR:

Would it be fair to say that there were other bidders on this project that lost out because they were higher than your original bid?

A. This project was primarily awarded because of the electrical benefits that it --- it provided and there's a number of factors evaluated throughout that process. Mr. Colley can speak more to the costs and Dr. Abdulsalam speak to the PJM need.

CHAIR:

In looking at the project, did NextEra or is NextEra looking to try to locate this line along

Department of Highway rights of way?
A. So as part of our routing study, we look at a number of different types of linear infrastructure that we could parallel. That included roads, highways, transmission line rights of way, pipeline easements. We looked at a number of different opportunities to parallel infrastructure and to work through the region and that did include roadways.

CHAIR:

If you know, how much of the preferred route is covered already by existing rights of way that you all are going to take advantage of?
A. Just give me a second. I believe that number's included in my testimony. I believe that number is approximately 50 percent.

CHAIR:

Fifty (50) percent. Okay, thank you. Mr. Callas, you have Redirect?

ATTORNEY CALLAS:

I have no Redirect. Thank you, ma'am.

CHAIR:

Okay, thank you. Ms. McCormick, you may be excused.
A. Thank you.

CHAIR:

Okay. So we have 20 minutes to get to the next witness, before we take our lunch break.

ATTORNEY CALLAS:

Okay. The Company calls Ryan Colley to the stand.

COURT REPORTER:

Could you please raise your right hand?

RYAN COLLEY, HAVING FIRST BEEN DULY SWORN, TESTIFIED AS FOLLOWS:

DIRECT EXAMINATION

BY ATTORNEY CALLAS:

Q. Good morning, Mr. Colley.

A. Morning.

Q. Give your name and business address, please.

A. My name is Ryan Colley. My business address is 700 Universe Boulevard, Juno Beach, Florida.

Q. How are you employed?

A. I'm sorry?

Q. How are you employed?

A. I'm employed by NextEra Energy Transmission.

Q. In what capacity?

A. I am the Executive Director of Transmission Development.

Q. Okay. In that capacity, have you been involved in the developments and other aspects of the MARL project?
A. Yes, I have.
Q. Did you cause to be prepared pre-filed Rebuttal Testimony in this case under your name?
A. Yes, I did.
Q. And did you adopt the testimony previously filed of Matt Pawlowski?
A. Yes, I have.
Q. Do you have any corrections that you believe need to be made to either one of those pieces of testimony today?
A. I have one correction to my rebuttal. On page 27, line 10, the number that's referenced there, the $512.61 million should be revised to $440.95 million.
Q. Okay. So let's --- let's --- you got --- you got to it very quickly. So we're going to let people turn to their versions of your testimony. Page 27 of your Rebuttal. And then we're going to --- we're going to give that one more shot, Mr. Colley, so everybody can write it in.
A. Okay.
Q. And --- and --- and in connection with that correction, maybe you can give us context of how the --- why that correction is needed.
A. Sure. So again, page 27, line 10, the number that

is there right now is $512.61 million referencing the project cost cap. That project cost cap was prior to a rescope of the project. After the rescope of the project, the project cost cap was actually reduced to the $440.95 million.

COMMISSIONER RANEY:

Say again, 449?

A. $440.95.

CHAIR:

And what page are you on, please?

A. It's of my rebuttal. It's page ---

CHAIR:

Oh.

A. --- 27, line 10.

CHAIR:

Okay, thank you.

ATTORNEY CALLAS:

With leave of the Commission, there is one additional correction that walking in this morning I didn't think needed to be made, but through Mr. Williamson's examination of Ms. McCormick, he identified it for me.

BY ATTORNEY CALLAS:

Q. Could you turn to the application, which is in probably the biggest binder among the binders that

surround you there at the very beginning. I think it's that one, yes. And go to paragraph 29. I don't recall what page that was, but ---.

ATTORNEY WILLIAMSON:

It's page 20.

BY ATTORNEY CALLAS:

Q. Page 20.

A. Okay.

Q. Now, that paragraph talks again about project cost and there's a reference to 2031 dollars. I recall in your --- at the beginning of your Rebuttal Testimony, you present what you asserted was a correction that needed to be made to Mr. Pawlowski's Direct Testimony that related to this very same issue; is that correct?

A. That is correct.

Q. Okay. And with reference to his testimony, can you just tell us what the reason for that change was?

A. Yeah. So the clarification is that the cost of $1,167,200,000 is actually in what's referred to as nominal dollars.

Q. Uh-huh (yes).

A. And that represents the dollars being spent as they're needed, rather than all costs of the project being escalated out to 2031. So that's the clarification that we're making.

Q. Would a similar clarification of the same number be appropriate at paragraph 29 of the application?
A. Yes, it would.

ATTORNEY CALLAS:

Okay. Your Honor, I'd like to amend and revise the --- the application to make that correction in that location as well from 2031 to nominal.

CHAIR:

Okay, thank you.

ATTORNEY CALLAS:

Okay.

ATTORNEY GRUNDMANN:

Your Honor, may I just ask one quick clarifying question before we leave this? There's a couple of places in paragraph 29 beyond just that first sentence that reflects the total project cost here it sounds like you are changing it from in 2031 to nominal. If you move down in the paragraph, there's a couple of other numbers that are all reflected in 2023 dollars or escalated. Are you making any changes to that provision which appears to be a breakdown of the $1.167 billion?
A. No, not making a change to those.

ATTORNEY GRUNDMANN:

Thank you.

BY ATTORNEY CALLAS:

Q. Thank you, Mr. Colley. With the one change that you referenced in your Rebuttal Testimony, do you ask the Commission to accept Mr. Pawlowski's Direct and your Rebuttal as your sworn testimony in this case?
A. Yes, I do.

ATTORNEY CALLAS:

Okay. Your Honor, I offer Mr. Colley for Cross.

CHAIR:

Mr. Hanna?

ATTORNEY HANNA:

No questions. Thank you.

CHAIR:

Mr. Harkins.

ATTORNEY HARKINS:

No questions. Thank you, Your Honor.

CHAIR:

Mr. Williamson?

ATTORNEY WILLIAMSON:

Yes, ma'am. Thank you, Mr. Presley.

CROSS EXAMINATION

BY ATTORNEY WILLIAMSON:

Q. Good afternoon. I'm Derrick Williamson and I represent WVEUG. How are you?
A. Good afternoon. I'm good.

Q. Do I understand this is the first time you've offered testimony?
A. Correct.
Q. Good for you. We're going to go back to that paragraph 29 in a second, but I had another question for you. In your Rebuttal Testimony, pages 14 and 15, line 13 carrying over to line 4.

COMMISSIONER RANEY:

Say again, Mr. Williamson.

ATTORNEY WILLIAMSON:

It's page 14 of the rebuttal beginning at line 13.

BY ATTORNEY WILLIAMSON:

Q. And someone convinced you to put in while I'm not an attorney into your testimony. Always a --- a good idea. But you do then ruminate on some issues that were raised about FERC process. Is it your understanding that that show cause order could lead to changes in the way that transmission costs are allocated?
A. I don't --- I'm --- I'm not --- I think that's a question I'm not authorized to really speak to if it could or it could not. I do know that that directive is not regarding the regional transmission explain --- expansion process.
Q. But would you concede that it could implicate

transmission cost allocation?
A. I think that's a hypothetical that, yes, probably it could.
Q. So you had attached to your testimony, NEAT MA RCR Attachment 1. Can you turn to that?
A. Was that in my Rebuttal or was that ---?
Q. That's your Rebuttal, yes. It's not the testimony you adopted. It's your --- your Rebuttal Testimony.
A. Okay.
Q. I believe it's your only attachment. And at the time --- and you included, I think it was a filing made in this proceeding.

ATTORNEY WILLIAMSON:

That's correct, right, Mr. Callas?

ATTORNEY CALLAS:

Yes. There are two attachments to that attachment, one and two.

ATTORNEY WILLIAMSON:

Okay.

ATTORNEY CALLAS:

And one of them is a PJM letter to Secretary Buckley in this docket.

BY ATTORNEY WILLIAMSON:

Q. And so this was the first one. This is the filing that was made. And at the top of page five, it describes

the FERC's June 18th order as a prospective tariff that could affect the process and allocation of cost for future large load transmission service requests. Do you see that?

A. I apologize. I'm --- I'm --- I'm not on page five.

Q. It's top of page five of your first --- it's Bates 83.

ATTORNEY CALLAS:

In other words, it's --- it's not one of the two PJM letters. It is the text of the --- the filing that comes before that.

ATTORNEY WILLIAMSON:

This was an attachment to your rebuttal.

ATTORNEY CALLAS:

Bates 83 at the bottom of the page.

A. Okay. Page five, yes. I'm there.

BY ATTORNEY WILLIAMSON:

Q. Correct. And the first sentence just indicates that the FERC's June 18 show cost order will address how PJM and transmission owners, among other things, allocate costs for future load --- large load transmission service requests. Do you see that?

A. I do see that, yes.

Q. And would you agree that that implicates the allocation of transmission costs?

A. Yes, I think it could ---
Q. Thank you.
A. --- be included, yes.
Q. Okay. We're going to go back to this cost issue. So I'm struggling now with that paragraph 29 of the application, big binder, on page 20. And I would ask you following on Ms. Grundmann's comment, if it --- it now reads the cost estimate is for approximately $1.167 billion nominal dollars; correct? That's the way it's supposed to read?
A. That's correct.
Q. And then below, there are three other figures. It's the initial planning level estimate in 2023 dollars and a contingency in 2023 dollars. In your estimation, are those correct?
A. Those are correct. Those numbers are shown at '23 dollars because of the window in which the regional transmission expanding process, the time frame for responding to that.
Q. So those were the dollars that were projected or estimated in that 2023 time frame; correct?
A. Well, those dollars are not what was originally submitted.
Q. Yeah. We'll get to ---
A. Yeah, yes.

Q. --- your Rebuttal. We'll work our way through that.
A. But that's --- that's the reason it's in 2023 dollars, yes.
Q. And then the other escalation number, which is halfway through the paragraph of $207,000,000, is that in current dollars, nominal dollars, 2023 dollars? What is that?
A. That's accounting for the movement of --- yes, it would be that that piece would be nominal. That would represent your nominal spend.
Q. So those are nominal dollars ---
A. Correct.
Q. --- as well? And so when we say the $1.167 billion is in nominal dollars, that is as of today or as of 2025 or as of the date you submitted your revised numbers to PJM?
A. So that is as of the date that we filed this application. I'm not aware of any updates that need to be made to these costs.
Q. Okay. So while we're on that topic then, let's work our way through that cost progression that the --- I'm sure you were here for Vice Chairman Raney's questions?
A. Yes.
Q. Okay. So I think it's at --- at least the relevant section begins at page 23 of your --- or, excuse me, page

23, line 14, over to page 24 of your Rebuttal.
A. I'm there.
Q. Okay. So at page 23, line 16, you indicate that the --- so this is the --- the original bid was the $683.55 million dollars; correct?
A. That's correct.
Q. And when was that bid entered?
A. That bid was submitted in July of 2023.
Q. And then if we turn to page 24 at line 1, you indicate or your testimony indicates it was revised to $440.95 million dollars. That was subsequent?
A. That was subsequent; correct?
Q. And when was that revision made?
A. That revision was made in August of 2024.
Q. And as you mentioned, it's because fairly major portion of the line was removed from the project?
A. Correct.
Q. And then you updated the construction costs to $844.8 million; correct?
A. That is correct.
Q. So you went from $440,000,000 to $840,000,000; correct?
A. That is right.
Q. And that was in December of 2025?
A. That's correct.

Q. And then --- so I'm not supposed to do this, but I know the Vice Chairman's going to ask this question. So what --- what caused --- and it's an open ended question. What --- what caused that doubling of the cost?

A. Yeah. Happy to walk through this. So it's very important to understand the initial number that was provided to PJM, that is a conceptual planning estimate that is developed during the 60 day window in which we have to study, identify solutions, and then provide estimates for those solutions. In this particular window, we identified over 1,100 possible solutions. We submitted 26 possible proposals to PJM, 14 of which were addressing the region in which MARL was ultimately selected. So in that time frame, again, it was a conceptual planning level estimate. That's how every --- all of the Respondents are doing their estimating on possible solutions during --- during a short time frame like this. So there was no routing. There was no design and no engineering built into those numbers.

Since that time, we have had a chance to perform a full routing study, as Ms. McCormick referenced earlier. We have design and engineering --- first phase of design and engineering is complete. And based on the results of those, that is what resulted in the updated cost to the $844,000,000. I would add that that updated base cost

estimate is very comparable to PJM's own independent estimates, which they do completely separate from us of $830,000,000.

Q. Yeah. And you --- you mentioned that in your testimony.

A. Yeah.

Q. And so then, now as we sit here, the --- the cost estimate that you've clarified is in nominal dollars as of the time of the filing, which was January of this year is $1.167 billion; correct?

A. That is correct.

Q. And that includes, as you relay in your testimony, some project contingency, some escalation and some root refinement additions; correct?

A. And taxes, yes.

Q. And taxes. And so we went from a number of $440,000,000 in August of 2024 to $1.167 billion in January of 2026; correct?

A. Correct.

Q. And would you agree that --- that it's subject to change, the in service date is, in 20 --- preferred 2029, but likely 2031 in service date, and so that those costs will likely adjust?

A. The costs could adjust. I think Ms. McCormick addressed this earlier, but yes, those --- those ---

there are various factors which could cause an adjustment to the cost, but that's a big part of why we are carrying $115,000,000 in contingency that you just referenced.

Q. And so if we go to your, the Direct Testimony you adopted at page 27, footnote 16.

ATTORNEY CALLAS:

It should be directly before your rebuttal in that book, Mr. Colley.

A. What page was that, Mr. Williamson?

BY ATTORNEY WILLIAMSON:

Q. It's the Direct Testimony adopted, page 27, ---

A. Twenty-Seven (27).

Q. --- footnote 16.

COMMISSIONER RANEY:

Mr. Williamson.

ATTORNEY WILLIAMSON:

Yes, sir.

COMMISSIONER RANEY:

I'm on page 27 of Mr. Colley's Rebuttal.

ATTORNEY WILLIAMSON:

No, it's Direct Testimony.

COMMISSIONER RANEY:

Of Pawlowski?

ATTORNEY WILLIAMSON:

Pawlowski --- it's the testimony that Mr.

Colley adopted.

COMMISSIONER RANEY:

Okay, all right.

ATTORNEY WILLIAMSON:

Page 27, footnote 16.

COMMISSIONER RANEY:

The other thing is I'm not a Vice Chairman I can't handle that kind of responsibility.

ATTORNEY WILLIAMSON:

You know what? I'm going to just keep calling you that and we'll see how it shakes up.

COMMISSIONER RANEY:

Too much pressure.

ATTORNEY WILLIAMSON:

Is everybody there? You got it, Commissioner Raney?

COMMISSIONER RANEY:

All right. I'm there.

ATTORNEY WILLIAMSON:

Okay.

BY ATTORNEY WILLIAMSON:

Q. So it talks about --- I'm sure there more than this. But that footnote which you've adopted talks about subject change. It notes potential changes such as sequence of construction. Do you know what that means?

A. My understanding that is in reference to there is a construction plan and there's a sequence of events that --- that are involved in that --- in that plan. Mr. Givens can provide more details on that. But if any of those change, that --- that could affect --- could affect the costs.

Q. And then it goes on to say other factors that may affect cost.

A. Uh-huh (yes).

Q. Do you know what some of those other factors may be?

A. Sure, and I can give you one example. So when we are able to get on site and perform geotech analysis, that will inform if the assumptions that we've made about how we're going to locate the towers and any kind of reinforcements that we would be needed for the towers. I mean, all of that will be informed through that geotech analysis. That's --- that's one example of something that could change.

ATTORNEY WILLIAMSON:

So, Madam Chairman, I have two more areas. I know it's 12:32. I'm going to move on from this cost area.

CHAIR:

So we can break for lunch now?

ATTORNEY WILLIAMSON:

I'm --- I'm giving you the approval to do that. Yes, ma'am.

CHAIR:

Yes, thank you. All right. We'll break for lunch and come back up 1:32.

SHORT BREAK TAKEN

CHAIR:

Okay. So we're ready to go back on the record. And Mr. Williamson, I think you are in the process of Cross Examining.

ATTORNEY WILLIAMSON:

Thank you, Chairman.

BY ATTORNEY WILLIAMSON:

Q. Good afternoon, Mr. Colley.

A. Good afternoon.

Q. My --- my colleague, Ms. Grundmann pointed something out to me. So I do want to just return to paragraph 29 of the application, page 20. Paragraph 29, page 20. All right. Just making sure everyone was there. In the middle of that paragraph, it indicates that the --- the $1.167 billion dollar estimate in nominal dollars is based on the initial planning level estimate of $844.8 million dollars in 2023 dollars. And when you and I were going through the progression of cost changes, you had indicated that the $844.8 million dollar number was as of

December 2025. Can you explain that difference?
A. It's a --- it's a cost reflected in 2023 dollars, but it has been updated through --- we don't have any updates to it as of the filing of the application. That's --- that's the difference in the timing.
Q. And so as we sit here today, if you started building the project, would you escalate that 2023 figure based on some annual percentage basis?
A. Yes. If you --- if we were to start spending those dollars now, you would escalate them up. But again, because of PJM's processes, it's --- it's easiest and it's standard for all developers to reflect dollars in the year of the window. So that's why it's --- that's why it's showing that way.
Q. And so the actual cost or updated cost at the time you begin to build the plant will be higher than $1.162 billion because of escalation?
A. No, the $1.167 is reflective of an in service date in 2031 and we're still on track for that.
Q. But the $844 is as of the 2023 ---
A. Correct.
Q. --- entry. So that could change and that does inform the 1.16 figure ---.
A. It does inform the 1.167. That's part of what the --- we've got taxes and escalation grouped together in

the $207,000,000. That's a portion of what you're referencing.
Q. I understand.
A. Yes.
Q. And then same thing, we're going to go through the --- the designated entity agreement. But just because it's a similar issue, I had a discovery response that Mr. Pawlowski had provided and he indicated that the total project cap cost of $440,000,000 was in 2023 dollars. Is that accurate?
A. That is accurate.
Q. And will that cost cap change at some point in time?
A. The cost cap will not change. That is a binding ---.
Q. So that number won't be escalated on any basis going forward?
A. Well, it --- it --- it's reflective in 2023 dollars. So there --- there would be a --- an escalation amount of what that --- what that would translate to, but we will not exceed that cost cap.
Q. After the escalation?
A. After the escalation.
Q. So the escalation, if it's three percent per year for five years, would take it over $500,000,000; correct?
A. I don't ---

Q. Roughly?
A. --- have a number, but ---.
Q. It would increase by some amount?
A. Correct.
Q. Okay, all right, thanks. In Mr. Pawlowski's Direct Testimony that you adopted at page 27 --- so this is the Pawlowski Direct at page 27 and I'm looking at line 10 through 14. There seems to be a little bit duplication in the language there. Do you see that?
A. In --- in which line?
Q. Lines 10 through 14, page 27.
A. Yes. That speaks to how will the cost of the MARL project be allocated.
Q. I think it speaks to it twice, yes.
A. Yes, yes.
Q. So when --- you've adopted the testimony. When it indicates that it will be allocated by PJM to load serving entities, how would you define load serving entities?
A. That's not really for me to define. I think that's a PJM term. It's load serving entities within PJM. So Dr. Abdulsalam can speak more about who those load serving entities are. But this is our understanding as explained in the tariff.
Q. All right. So you're just punting that to Dr.

Abdulsalam and Ms. Menhorn?
A. Yes.
Q. Okay, that's fine.
A. Okay.
Q. So, I want to talk about the DEA, the designated entity agreement. And that's Schedule --- Schedule B to the application. And you have some references in your Direct Testimony as well as in your Rebuttal Testimony. And then if you turn to Schedule E, which is toward the back of that document, it's Bates 97 is where that begins. And you also summarize elements of this in your Rebuttal Testimony. And I think Mr. Pawlowski's testimony indicated there --- there are four main protections. I think you've winnowed that down to three. You indicate that there's an ROE cap of 9.8 percent; correct?
A. That's correct.
Q. And it's --- and the lower of 9.8 percent or the FERC approved ---
A. Correct.
Q. --- ROE. So worst case, it can't be any higher than 9.8 percent.
A. That is correct.
Q. Correct? And there's some language that you have in your testimony that says i.e., as in that is, from the

date of initial operation until the project is retired and de-energized. And that's at page 26 of your Rebuttal, lines 18 and 19.

A. Yes, that's correct.

Q. And I interpret that to mean your position is that that cap on the ROE cannot apply during construction.

A. That is correct.

Q. And Ms. Menhorn, who you referenced in your other testimony --- and we ask her questions, too. In fact, when she did her analysis, used an ROE of 10.77 percent with respect to cost recovery during the construction period. Does that sound accurate?

A. Sounds accurate.

Q. And if we return to Schedule E and we look at the paragraph A, capital A, numeral I. And just let me know when you're there.

A. I'm there. Uh-huh (yes).

Q. So there's a sentence begins to the --- I guess it's the second full sentence. It says the ROE cap shall apply to the project cost as defined below. Do you see that?

A. I do see that.

Q. And if we turn the page, at least my page, on page two, under project constant cap, which is letter B, number 2, and then lowercase b, it says project costs

mean any and all costs and expenses incurred, and I'm going to skip the language, to develop, construct and complete the project.
A. Uh-huh (yes).
Q. The definition of project cost includes construction costs; correct?
A. It is included. It is a portion of project costs.
Q. And then why would the 9.8 percent ROE cap not apply to project costs that reflect construction?
A. Because as part of the voluntary cost containment that needs put on this project, it specified that the cost containment starts at the SCOD of the project.
Q. I'm reading the DEA agreement you executed with PJM. And you worked on that; correct?
A. Correct.
Q. And the agreement says that project costs include any and all costs incurred to construct. The cap on the previous page says the 9.8 percent ROE applies to all project costs as defined below.
A. Yes, I see that.
Q. Another benefit that you indicate is that the cap on the equity component of the return calculation; correct?
A. That is correct.
Q. And that's a cap at 45 percent equity; correct?
A. That's correct. That's correct.

Q. And then there's a --- a form of a cap in that there, at least conditionally, would be no earnings above the project cost cap amount of $440,000,000; correct?
A. Correct.
Q. And then there's a further provision that reduces ROE for delays by up to 30 basis points; correct?
A. That is correct.
Q. And in your testimony, however, you note that under no circumstance can the overall return on equity be less than 7.5 percent; correct?
A. That is correct.
Q. And that's at Schedule E under Section A, Numeral I, the very last sentence on page two of Schedule E references minimum ROE is 7.5 percent.
A. Yes, that's correct.
Q. And that means as you state in footnote 29 on page 27 of your Rebuttal Testimony, so page 27 of your Rebuttal, footnote 29.
A. Uh-huh (yes). Yes. I see it.
Q. That there'll be a revenue requirement adjustment to ensure that you earn a minimum of 7.5 percent ---
A. Correct.
Q. --- regardless of all the other elements of the DEA cost containment provisions; correct?
A. That is correct.

ATTORNEY WILLIAMSON:

Okay, thank you. I have no additional questions.

CHAIR:

Mr. McGhee?

ATTORNEY MCGHEE:

No questions.

CHAIR:

Mr. Stephens.

ATTORNEY STEPHENS:

Thank you, Madam Chairman.

CROSS EXAMINATION

BY ATTORNEY STEPHENS:

Q. Mr. Colley, my name is Bradley Stephens. I represent the County Commissions and Ponderosa Pastures Corporation in this proceeding. I believe I mainly just have a handful of questions for you concerning your Rebuttal Testimony. If you turn to, please, to page ten of that testimony. I'll give you a chance to catch up. It's Bates 059 at the end at your Rebuttal Testimony. Just let me know when you're there.

A. I'm there.

Q. Oh, okay. Thank you. You mentioned there on, I believe it's line 11 of page 10, you make reference to heat waves this past summer, the summer of 2026. And you

refer to in the District of Columbia and Maryland, the load imports there exceeded four gigawatts. You see where I am there?
A. I do see that.
Q. Okay. The --- the --- the reason --- wouldn't you agree with me, the reason that those areas needed to import, you know, an amount of energy exceeding four gigawatts is that all else being equal, they were four gigawatts or more short of localized generation that was dispatchable closer to the load?
A. That --- that's how I would interpret, yes. Imports is the load is exceeding the generation in that area. So there was a need for them to import energy, correct.
Q. Sure. So hypothetically then, if they had the over four gigawatts of generation capacity nearby and not on the other side of the transmission constraints, they wouldn't need to import any electricity, is that right?
A. I think that's a --- in general, that's probably correct. There --- there are some scenarios where I think that if you're in a particular area that's a heavy exporter, then you could see some differences. But I think in general, your statement is correct.
Q. Thank you. And a little bit further down from that, Mr. Colley, you refer to significant locational marginal price separation. I think that is usually shortened to

acronym LMPs, right?
A. That's correct. Uh-huh (yes).
Q. When you say separation, what do you mean by that there?
A. That's just that's referencing that the locational marginal price in one particular area of the system versus another. The term separation means that you've got a pretty significant cost difference because of congestion, transmission congestion. And so, the statement is in reference to the congestion. The reliability problem that PJM has identified that is driving this exact need is also showing up from a congestion cost perspective. And as referenced here, it's actually showing up today.
Q. Okay. So in other words, basically, if you boil down what you're saying there, your testimony is that this summer when it was really hot, LMPs in the, say, the Baltimore Gas and Electric and PEPCO zones tended to be substantially higher than, for example, the AEP or APS zones. Is that fair to say?
A. I think that's fair to say. On this specific --- this specific event that we're referencing, yes, that was the case.
Q. Okay. And you --- I think you go on to say that you attributed that LMP separation to limited transmission

import capability. And I believe you also cited tens of millions of dollars in additional costs for transmission customers in BG&E and PEPCO zones. Do --- do you --- do you know who ends up paying those --- who ended up paying those additional costs?

A. Yeah, I can't --- I can't answer that question. I'm not sure.

Q. Would someone at PJM know the answer that question?

A. You can ask Dr. Abdulsalam. I'm not --- I'm not positive that that's his area of expertise.

Q. Just more fundamentally though, can you tell me how it is that you know that there were tens of millions of dollars in additional cost for transmission customers in those zones?

A. Sure. We've got --- we've got --- as part of our planning team who plans the --- our solutions for the PJM system, that is something that we --- that we track, especially on days where there's expected to be congestion, especially when those areas relate to transmission projects in which we are providing solutions to a problem that PJM has identified.

Q. Okay. Moving on to your references on page 13, you --- you reference the Transmission Expansion Advisory Committee or TEAC.

A. Correct.

Q. And you --- you say that it's open to representatives of state utility commissions, agencies, officers, estate consumer advocates, and other interested parties. Does that embrace your, I guess, your description of --- of the TEAC?
A. Yeah. It's --- it's a public stakeholder forum that PJM uses for its reliability transmission expansion planning processes.
Q. Okay. Does TEAC have any decisional impact on whether a project is approved in the RTEP, or in other words, does it --- does it have any kind of veto power over that?
A. That's a question for Dr. Abdulsalam.
Q. Okay, fair enough. Moving down to page 22 of your Rebuttal Testimony. I'll let you catch up. You refer to the AEPs, I'm probably mispronouncing it, but I guess it's Kammer-502, 500 kV line.
A. Yes.
Q. There, you --- you reference a LiDAR SAG study that AEP, I guess, is conducting or has conducted at PJM's request. And that was to evaluate whether the line rating on that line can be increased, is that right?
A. That's correct.
Q. Do you know if it's been completed?
A. I --- I can't say definitively and I don't want to

speculate. That'd be another question I think Dr. Abdulsalam could --- could answer that question.
Q. How --- how did you hear of this development?
A. This was part of our proposal to PJM. We identified that we knew that new west to east infrastructure was needed. That's what the studies have clearly shown. However, there were portions to the west prior to building the new facilities where there could be existing facilities that exceed their thermal capability. And the solution for those could be a modification of existing --- of an existing line or an upgrade of an existing line. That's what this is in reference to.
Q. Okay. That --- I believe you do attribute that directly to, in the modeling, the MARL line. This is an imprecise term, but I think maybe you use it pulling power west to east instead of that sort of pressure or suction, if you will, in that direction could impact the Kammer-502 line, is that right?
A. I think that's a fair assessment. I would just say that the --- the need for a west to east facility is there with or without MARL. But MARL's specific location, yes, to use your term suction on this --- on the source end of it could cause the need for, yes, an upgrade to an existing facility rating.
Q. Thank you. Do you know if any LiDAR SAG studies

have been conducted on other 500 kV lines in the AEP or APS zones?
A. I can't speak definitively to what --- what they've done. I'm not --- I'm not sure.
Q. Would that be maybe a good question for Dr. Abdulsalam?
A. You can ask him. I'm not sure if he knows the scope of what AEP or FirstEnergy had done.

ATTORNEY STEPHENS:

Okay. I believe that's all I have, Mr. Colley. Thank you.
A. Thank you.

CHAIR:

Mr. Williams.

ATTORNEY WILLIAMS:

Thank you, Chairman Lane.

CROSS EXAMINATION

BY ATTORNEY WILLIAMS:

Q. I've got a few questions and one of the things I'd like to start with is sort of going back a little bit on the process that you described going through with PJM. As I understand it, you have basically a 60 day window to submit various solutions to a problem that PJM's offered?
A. That's correct.
Q. And does that limit what you're able to look at as

potential solutions?
A. Well, we've --- we've got a very good team in house and we are able to --- specifically our planning team is able to run thousands of possible solutions to a problem. As I mentioned, we ran over 1,100 solutions in this specific window to identify what we believe could be the best solutions to the problem that PJM had identified. We feel good about the proposals that we submitted. Again, we submitted 2,614 that were for this specific problem. We feel good about those 14. MARL was ultimately selected as part of that. So, I --- I --- to answer your question, we feel good about our ability to come up with a solution that fixes the problem.
Q. Now, of the solutions you offered, did --- did NEET have any presence in this area before? Do you own any facilities in Pennsylvania, Ohio, Maryland, Virginia before this proposed project?
A. We do not own any facilities in those existing states, any transmission facilities.
Q. No transmission facilities?
A. Correct.
Q. But in Florida, you own transmission as well as operating systems?
A. We --- we do and we own transmission in --- in --- in lots of states, just not the states that you

referenced.
Q. Okay. So when you came up with solutions in this area, I think on page 20 of --- let's look at page 20 of Mr. Pawlowski's testimony. The question was did NEET MA's proposal number eight utilize existing roads or existing facilities? And at that point, he's talking about utilizing, I guess, the ability to utilize existing or parallel existing transmission lines that are going throughout the area. So a lot of these are --- like the facilities are owned by FirstEnergy?
A. Correct, that's right.
Q. Or --- or owned by another entity in the area. You're seeing whether they could be included in the solution that you're developing?
A. That's right.
Q. Does that also include the possibility of upgrading or double circuiting any existing facilities when you want to upgrade to a 500 kV line?
A. We have looked at --- we --- we've looked at various options for reconductors, for utilizing existing right of way as much as you can within a 60-day time frame.
Q. Yeah. Does the 60-day time frame limit your ability to negotiate with other entities about sharing facilities or ---
A. Yes.

Q. --- upgrading facilities?
A. Yes. Well, and --- and --- and you're also in --- you're competing, right? You've got competitive solutions. We are proposing solutions. The entities that you referenced are also submitting their solutions to a problem. So yes, there's not time really to collaborate together in general. There --- there are exceptions to that, but in general, that --- that's correct.
Q. Once you've been selected as the option, is there opportunity for pursuing additional collaboration with somebody like FirstEnergy to look at better ways of serving that corridor you're wanting to come through?
A. Absolutely there is. That's exactly what we did here. We --- after we were awarded the MARL project, we recognized that there was a need or there was a possibility east of Woodside for us to collaborate with primarily FirstEnergy and Dominion to utilize existing right of way to --- to get down to the final point that PJM had identified for the --- for the project. So we collaborated with them. We collaborated with PJM. All parties agreed that this could be done and it would be good for ratepayers, for PJM ratepayers to utilize those existing right of ways. So the scope was changed. We actually, next year, actually lost scope as a result of

that. But it was --- it was the right thing to do for the area. So east of Woodside, our line was --- our scope --- the scope for our portion was taken away and given to FirstEnergy and Dominion to finish out that piece.

We looked at west of Woodside of doing that also. Ms. McCormick testified earlier about where we looked at how we could utilize existing right of way. There's just not as much existing right of way to --- to --- to utilize to go that far from the 502 Junction all the way down to Woodside. So there was a difference. There were areas where you could do some collaboration, but we found that it would likely result in the displacement of homes. And so it just --- it wasn't --- you didn't have as much availability west of Woodside as we did on the east.

Q. When you're looking at options for what you can do when you're trying to share things in this --- in the same zone and you look --- you end up working with having adjacent right of ways side by side. Are there also options you could look at for putting in new tower in the middle of the existing right of way, just present solutions? Possibly have two circuits hanging through the same area.

A. So you're talking about going from a single circuit to maybe like a double circuit?

Q. Yes.
A. Yes, yes. We do look at that. We have looked at that.
Q. And you can do that either with a wider base on a traditional horizontal one or you can even look at the vertical pole as well?
A. Okay. We --- we --- we rely on our engineering team to tell us what's possible and where it can be done. We do look at it. But ultimately, also going from a single circuit to a double circuit, that's not something that we have the authority to just make that change. PJM would have to authorize that. But that was not --- that was not an option that we found to be as effective as part of --- of the solutions that we submitted for MARL.
Q. Is that part of the solution could still be looked at for areas where we're seeing parallel where you could put in maybe for certain shorter sections instead of paralleling the lines, having basically FirstEnergy's line at one level, your 500kV line at another level?
A. So I think what you're --- I think you're referring to maybe optimizing ---
Q. Yes.
A. --- optimizing the existing route. I would just refer back to Ms. McCormick. I mean, we've --- our routing study, the full routing study that we looked at,

it sought to do much of what you're referencing. And where --- where there could be optimization, that's what we've done. But in terms of going back and --- and using double circuits instead of parallel right of ways, I'm not sure that --- that --- that there's --- I think we've looked at that and we've ended up with a --- an optimal route at this time.

Q. Maybe I'm just characterizing what Ms. McCormick said earlier. I thought she just said that --- if I look back at her testimony, I thought she just said that you couldn't use right of way that was owned by another utility.

A. That is correct. We --- we --- we cannot do that. It would have to be a collaboration.

Q. It has to be a collaboration?

A. It'd have to be a collaborated solution submitted to PJM. Both parties would have to do it and it would have to be feasible as well.

Q. But it is feasible from a technical standpoint to do that in a right of way if you put it on a vertical pole?

A. Well, I --- I can't speak to a --- a hypothetical segment. I mean, our engineering and construction team would have to verify ---.

Q. Is there another witness I could ask that question of?

A. Mr. Givens. Mr. Givens can probably provide some color on what's --- what's possible and what's not.
Q. Okay, thank you. I'd like to talk a little bit about the letters that you got from PJM. They're attached to your Rebuttal. And there's an attachment one letter from PJM dated September 22bd, 2026 and a prior letter of August 3rd, 2026. I'd like to talk a little bit about the background of what's behind those letters. What's your understanding that PJM saw the need to issue these letters? What had transpired that was different from the original project that was, you know, possibly impacting the need or the perceived need for the projects?
A. I think there's been some questions about subsequent --- their subsequent annual process that has identified additional projects that are needed. And I think there's been some confusion about are those projects needed on top of MARL? Could they be potential replacements for MARL? And I think PJM was responding to some of that confusion.
Q. Would you agree that at least for this project, there's --- were two main drivers that were supporting the need for MARL? One would be you were having deactivation of a lot of plants in the area that were already serving the Maryland, Virginia area, and you also

had a perceived growth of large load growth that's going to be happening anticipated in, particularly in Virginia around the data center corridor. Those would be two main things that were driving the need for MARL to begin with; is that correct?

A. That's --- I think Dr. Abdulsalam would be the right person to ask that question. But, in general, I think that load growth across the system is --- is --- is driving the need for transmission projects. There has been a significant amount of generation retirements. As a result, you end up with depressed voltages. And in this particular case, you're looking at a situation --- PJM has identified a situation where certain contingencies can cause a voltage collapse situation. That's how I would define the need for MARL.

Q. And part of what was looked at was, while you're presuming earlier Brandon Shores and other facilities like HA Wagner are going to be retiring, that got reversed by PJM and they were going to now be staying in effect until at least 2031?

A. Yeah. I think that's another part of what drove the letter. Then --- the emergency operational need for those units should not be confused as a long-term permanent solution to a critical reliability problem. They're doing what they have to in real time to maintain

the system and to have a bridge to get to what the permanent solutions will be, of which MARL is --- is a piece of that.

Q. And I think at one point, we've seen reference in testimony of yours and other witnesses for your company that PJM was urging you to advance the schedule for MARL in light of certain developments. Can you tell me what the reasons were for them advancing the schedule now before 2031 and when did they make that determination?

A. So --- so the window where MARL was awarded the reliability need was actually in 2027. My understanding, that need has not changed. In fact, as --- as you brought up, there are signs that it's --- it's coming now and so the need hasn't changed. We're building the project as fast as we can, you know, managing the regulatory process that's driving a lot of the schedule. But to the extent that we can, we are going to accelerate the project as much as possible because we know the need is there.

Q. But the need we're talking about was based on assumptions you did in your 2022 study that you were submitting a response to. So that you had assumptions then about what your existing generation was going to be, what new generation will be coming online, what was it going to be coming offline, and what new load was coming.

Now, the new load that's coming, when you're talking about traditional residential, industrial, commercial loads is easier to anticipate than what's going to happen with these data centers. Would you agree that nobody knows where the data centers are going to be built now, where the hyperscale data centers are going to be located?

A. I can't speak to that. Mr. Gledhill, I think --- I think he's after Dr. Abdulsalam. He'd be the right person for that question. But what I --- one clarification I would make. Even though MARL was identified in the 2022 window, every year PJM performs its regional transmission expansion planning process and every year they have seen a need for MARL. The need has not gone away. The need has only grown, which has actually driven additional projects on top of MARL. So it's been reverified through their process and Dr. Abdulsalam can talk through that.

Q. If --- would you agree that the primary focus of this MARL line is to make sure that generation from Ohio and further west has a --- more of a route to Maryland and Virginia?

A. I don't know that I would characterize it quite like that. MARL does provide benefits. Because of the Black Oak Station and the Woodside Station, MARL is providing

electrical benefits to the lower voltage, the 138 kV system. PJM has testified --- so electricity doesn't recognize state boundaries. So as --- as the 138 system is supported at those --- at those locations, it provides support across the area, including into West Virginia. So yeah, I would disagree with the assertion that MARL is just an extension cord from Ohio to Virginia.

Q. Are you familiar at all with additional generations being proposed and developed in West Virginia?

A. Sorry. Could you restate that?

Q. Are you familiar with additional load and generation that's being developed in West Virginia?

A. I understand there's --- there's, yes, a significant amount of load. I can't --- I'm not an expert on any specific load or generation, but I am aware there's --- there's growth in those areas, yes.

Q. And would you agree that generation developed close to the larger load demand is one way of solving a problem that wouldn't require a transmission line solution?

A. I think in general, sourcing generation next to load is a good way to plan the system, but I cannot say that in this specific case that a generator next to a specific load or set of loads is going to solve the reliable --- reliability problem. I mean, it's a regional reliability problem. It's not --- it's just a --- a line that's

exceeding its rating. You're talking about PJM --- I'm sorry. PJM is talking about a potential voltage collapse situation of an entire region. That's what MARL is intended to fix.

ATTORNEY WILLIAMS:

Thank you. I'll leave my questions for the other witnesses, but I appreciate your responses. Thank you.

CHAIR:

Ms. Wilson.

ATTORNEY WILSON:

Yes, I've got just a few questions. I think most of my questions have already been asked, but I've got a couple left here.

CROSS EXAMINATION

BY ATTORNEY WILSON:

Q. Looking at page 17 of your Rebuttal Testimony, and that's Bates page 66, starting around line 17. You indicate that West Virginia is a net --- is a net electricity exporting state with significant generation resources. And those generators depend on robust, well-functioning transmission grid to deliver their output to load centers throughout the PJM region. At what points are there --- are there any connection points in West Virginia, so that we can deliver the energy that's

created here to other points in the system?
A. So I would --- I would just reiterate part of what I recently said about the addition of the Black Oak and Woodside substations to the MARL project. It is providing support on that 138 system. The 138 system, the voltage is being propped up. The --- the necessary reactive components to the transmission system are being supplied and that is helping enable power flow in the West Virginia transmission system. And Dr. Abdulsalam can expound on that answer as well.
Q. And I have just one other question. Looking at page 4 of your Rebuttal Testimony, starting around line 13, you --- you state that in my view and as --- as Dr. Abdulsalam testifies in his Rebuttal Testimony, this position incorrectly assumes that --- that individual LLCs will voluntarily decline large load customer requests because their independent assessments of the transmission system's capabilities lead them to conclude that reliability violations and other PJM zones might be created. Can an LSE connect a large load if it doesn't have the capacity to serve that load?
A. My understanding an LSE's job is to facilitate and walk a customer through an interconnection process, but an LSE is not a transmission planner. PJM performs the transmission planning process on behalf of the LSE's.

And so the LSE's will need to coordinate with PJM on prospective loads. And that's what has happened here through the regional transmission expanding --- expansion process.

ATTORNEY WILSON:

Okay. I have no other questions.

CHAIR:

Are there interveners who wish to question this witness? Okay, sir. Do you want to come back up to the table, please?

MR. HAYNES:

Thank you, Madam Chair. Thank you again and thank you, Commissioners.

CROSS EXAMINATION

BY MR. HAYNES:

Q. Again, my name is Martin. And I don't do this for a living, so I have not gone through every document and I'm probably like a lot of interveners. So I have maybe some rudimentary questions. Okay? How does NEET make his money off this project?

A. So I would defer you to Mr. Boykin, his testimony. He will go through in detail ---.

Q. You can't give a general explanation of that, just ---?

A. I would --- I would point you to him for the

specifics of it.
Q. Okay. Well, then, I'll go ahead and ask my next questions, but they're kind of dependent on that answer. How much do you anticipate --- how much does NEET anticipate profiting from the sale of or from the use of its lines annually from this project? What's the profit?
A. I can't --- I can't --- again, that's ---.
Q. Okay.
A. Yeah. What I can tell you --- this question's already come up. The voluntary cost containment that we put on this project results in us earning about a seven and a half percent return. That --- that is not an attractive return for us. We are incentivized to get this project done as prudently as possible, which is what we plan to do.
Q. That's better than some industries make, but it' snot bad. Okay. I'll skip a few questions, but this was sort of --- this question sort of hinted at it at one of the previous questioners. But what happens if the demand projections as a result of reduced data center demand or some other reduced demand result in less profit or less power going through these lines? What --- what happens to NEET's take on the project?
A. So I'm not sure I understand the last part of your question. NEET's ---.

Q. In other words, if there's not as much power going through the lines, you make --- NEET makes less money; is that correct?
A. That's not correct.
Q. Not correct? Same money. Why is that?

CHAIR:

Okay. Wait a minute. Mr. Williams --- it goes from here to here.

MR. HAYNES:

Can I ask him what the answer is?

BY MR. HAYNES:

Q. So why is that, that you make the same amount if there's even less demand?
A. So the --- the return that us or any --- any utility is going to recover is on their costs, the cost of building the project. It's not a function of how much power is flowing on the line.
Q. I thought I --- I just wanted to hear that. Thank you.
A. Uh-huh (yes).
Q. Okay. Sort of a dis --- well, I do have one other --- a couple other somewhat related. So what happens if there --- is any impact on this project if Valley North were approved, or for that matter the Virginia portion, the Valley Link portion, does that impact this project at

all or its usefulness?
A. So those are great questions for Dr. Abdulsalam. I can answer because I referenced it in my Rebuttal. PJM through subsequent annual processes has identified the need for the projects you referenced. Does not change the need for MARL. It needs --- it needs all of them based on the growth and the retirements and --- and the other voltage needs that --- that PJM is seeing in their studies.
Q. Okay. As I understand it, there's --- so this is a different issue. Is --- there is an existing FirstEnergy 500 kV line that goes from basically from Black Oak substation to Gore; is that correct?
A. I would need to see a map to --- to know the exact line that you're referencing. But yes, I think there is a line in that area.
Q. So earlier, you were talking about opportunities you're being asked about or talking about, opportunities to collaborate with FirstEnergy. Was that the subject of potential collaboration? And if so, why was that not agreed to, and maybe those lines parallel or double that?
A. Yes. We --- we did not have the same --- it was not the same opportunity west of Woodside, as I referenced earlier, which I think is the area that you're --- that you're talking about. There was not the same

collaboration opportunity on the west as there was on the east.

Q. Can you say why?

A. I don't --- I don't have all the reasons in front of me why not, so, and I can't recall the specific reasons why that. But I can say in general is --- is when you --- PJM has referenced that the tearing down of existing infrastructure to rebuild maybe an improved --- an improved facility at a time when you're already having reliability concerns, that can create a lot of issues as well.

Q. Okay. I can see that. One last thing. So I don't know if you're familiar with it, but in Virginia, close right outside of Winchester right on the Shenandoah River, there's something called the Warren County Station and it is a 1.5 gigawatt combined cycle plant. It was built in two years back, I think, in 2012. So if Virginia did not have --- so, along the lines of is there a better solution. If Virginia did not have its Clean Economy Act and did not have --- was not in the process of shutting down its existing fossil fuel plants and had a --- and it didn't have a future moratorium on fossil fuel plants, would it not be a better solution for this problem if Virginia was building its own power plants, maybe combined cycle plants at two or three years a pop?

That seemed like that would come online sooner than the MARL line is going to come on.
A. Yeah, understood. Yeah, I can't answer a hypothetical if it would work or not. Again, Dr. Abdulsalam may want to speak to this. What I can say is PJM is charged by NERC to look at contingencies and what those contingencies can cause. And one of those contingencies includes the loss of a generator on top of the loss of a line. So would adding a specific generator, one specific generator, solve the problem? Again, I can't speak to that.
Q. I wasn't speaking to just ---
A. Yeah.
Q. --- one generator. But anyway, the --- it's hypothetical, I guess, given that Virginia doesn't seem to want to do this. But maybe the point of the question was that we've got a neighbor that's using bad behavior here and we're paying for it in West Virginia.

MR. HAYNES:

So that's all.

A. Thank you, Mr. Haynes.

CHAIR:

That sort of sounded like testimony rather than a question. Okay. Next intervener.

MR. HOCKMAN:

Thank you, Commissioners.

CROSS EXAMINATION

BY MR. HOCKMAN:

Q. My name is Bryan Hockman. I'm from Hampshire County. And Mr. Colley, how are you?

A. I'm good. How are you, sir?

Q. I'm good, I'm good. You brought up something about the Black Oak substation that raised my interest. So I do try to attend a lot of the TEAC meetings, WebEx's. And in June of 2025, they brought up the Black Oaks open substation when they were talking about MARL and they said that between 502 Junction and the Gore that Black Oak just happened to be a decent midpoint for that line and they were concerned about a voltage violation and wanted to use that for voltage support. They didn't really say anything about using, utilizing that for any other --- other reason other than voting support, just so the voltage wouldn't drop before it got to Gore, the Gore substation. So I mean, is that, in your opinion, the reason why they're really looping into that?

A. So that --- that is my understanding. Tying in at Black Oak, again, provides voltage support on the underlying voltage, the 138 kV system. There's a need for voltage. There's a need for, again, the reactive component that the transmission system needs and Black

Oak is helping to solve --- solve that problem.
Q. The static bar compensators that you're talking about there? I mean ---.
A. Well, I'm just talking in general about the transformers that would be there to help bring the --- the power and the energy from the 500 kV system down onto the 138 kV system.
Q. Right, okay, yeah. That --- that's what I was concerned about because there was no talk about anything and maybe that would be something Dr. Abdulsalam can --- can answer, too. But they didn't say anything about the 138. When I hear 138, that --- that --- that seems to go more towards distribution, towards the communities and stuff where they just talked about basically boosting the voltage before it got to Gore. That seemed to be their only reason for that. I just wanted to make sure that that wasn't their only reason for that and ---.
A. I think he'll be able to talk all the reasons, all the benefits that you get from Black Oak. I think Dr. Abdulsalam can speak to that.

MR. HOCKMAN:

Okay, all right. Thank you.

CHAIR:

Next intervener. Okay, yes.

MS. GRUBER:

Is no one else in the ---.

CHAIR:

Yes. Can you ---?

MS. GRUBER:

Okay. Ms. Gruber.

CHAIR:

Can you get closer to your microphone so we can hear better?

MS. GRUBER:

Yes, ma'am. Is that better?

CHAIR:

No.

MS. GRUBER:

Okay. I don't --- say I don't know where --- how much closer I can get. I'm right on top of it.

CHAIR:

Can you turn up the volume?

MS. GRUBER:

Okay. How about that?

CHAIR:

That's better.

MS. GRUBER:

That's better? Okay, thank you.

CROSS EXAMINATION

BY MS. GRUBER:

Q. I just want to ask a clarification concerning financial responsibility of the property owners and the road taxation. So in this, as we've been talking, there's a 40-year paying of West Virginia taxes. I'm assuming that's for the portion of your land, of my land, like a homeowner's land would be paid for by you guys for 40 years; correct?

A. So I will repeat what Ms. --- and --- and refer you back to what Ms. McCormick said. I think your understanding is correct, but that is certainly not my area of expertise.

Q. Oh, I'm sorry. I thought you were the financial man. I was going to say because my question then is because the landman that came to my house, and this was also confirmed by his boss, said that my taxes would be paid for seven years and then after that, it falls back onto me. So I just wanted to get that clarified somewhere that we could understand what the tax is actually --- where --- where we are at this tax within the 40 years, if that taxation was going to the counties for just the fact that they get to run through the counties or if they were actually --- we are actually having our taxes paid.

And then the next thing I want to know, when does that actually start? So does that start when the

construction actually starts or does that start when the project itself starts? So you're not --- you're not, you know, digging up my yard yet. Maybe that's a year away. So then does my taxes get paid that year or do I get paid this year's taxes? So, it's --- so that --- that would be a nice thing to have clarified.

And then the -- the right of way, my understanding, is that it is for infinity, so forever. But we're only being, you know, paid either for 7 years or for 40 years. And then at what time --- what happens then? Is that then my job to pay the taxes on that after the 40 years or after the 7 years, whichever that actually turns out to be?

A. Yes. So I --- I'm going to defer this to Mr. Boykin who can, is going to talk a little bit more in general about rates and rate recovery. I would also say that we can --- we can connect with your land contact, Ms. Gruber, and make sure that all the questions that you got are being answered. I think that's certainly something that we can strive to do to make sure that you're comfortable with your understanding even beyond Mr. Boykin's testimony.

Q. I appreciate that. Thank you, sir. The other question I have, just this last one. So you talked about these retirements of lines. So I'm --- I'm parallel ---

I'm running parallel to a --- the existing row. So are --- if those lines are retired, then is there a reason why you can't build on that row instead of creating a separate parallel row on my property when you're retiring other lines? I mean, has that been looked at? I know you said you had looked at what would happen if we're retiring all these lines and we're replacing them, but you're not replacing them in the existing row; correct?
A. I'd have to --- I'd have to know specifics. Again, what I can say is the routing study that Ms. McCormick referenced earlier, has optimized --- has been fully implemented to optimize the route and to take advantage of all existing right of way where we can. So I --- I can't really speculate or it's hard for me to answer questions about a specific --- specific segment of that line. And maybe that's something that we can --- when we're coordinating with you through your land agent, maybe that's something we can follow up on as well.
Q. Yeah. Well, I --- I --- I would like you to coordinate with all the people that are --- that --- where lines are being retired, so that, you know, maybe --- maybe some of these people also don't need to lose their land, but I appreciate that. Thank you very much.
And one other thing that maybe you can answer, maybe you can't. Maybe it's --- maybe it should go back to Ms.

McCormick. But she had commented that there is 50 percent of the route is in parallel --- is paralleling existing row, so existing right of ways. And is that 50 percent of the route --- is that 50 percent of the west Virginia route or is that the overall route?

A. My understanding that is the overall route and --- and that's --- again, that's reflective of the hard work that the team has done to try to optimize as much as possible.

MS. GRUBER:

Thank you, sir. I appreciate it. Thank you, Ms. Chairman.

CHAIR:

Next intervener.

CROSS EXAMINATION

BY MS. EVANS:

Q. My name is Sarah Evans and I'm from Hampshire County. I know I didn't say that the last time. I have a question about Black Oak and maybe Woodside. I'm listening to all of this and I'm confused. I realize that it goes from this source where energy is supplied and it goes into this substation, whether it's Black Oak or Woodside. What I don't understand is how it helps me when there is not a line coming off of that that gives me any energy in my farm or in my home where I live. It

goes over here. And I've been told several different things about where it stops, you know. So it can go further or it gives energy here. But how does that help me? That's what I'd like to know.

A. Understand. So electricity is going to go to the path of least resistance. It's --- it --- it doesn't recognize state borders, as we said. PJM studies have shown that while the primary power is flowing across the 500 system, the two substations that we --- that are part of this solution, they do connect down to the lower voltages. And there was a statement earlier about those lower voltages are primarily what supports most residential and transports energy to residential. All of that is interconnected and that lower voltage needs to be propped up. It needs to have a --- a specific level of voltage supporting it so that power will flow. And PJM studies are identifying a problem in the lower voltage in this region. And Black Oak and Woodside are helping to provide that energy that --- that is affecting and providing support to lines in West Virginia. I don't know where your specific location is, but ---.

Q. And I would question, you'd have to take me out and show me those lines because when my electricity goes down, it's not because of a transmission line. It's a limb across a local distribution line.

A. Sure.
Q. So I still am unsure that it's actually helping me. So I'm paying for the MARL line, then I'm paying for electricity that comes from wherever. So I feel like as a property owner --- plus getting ripped off for the land itself. But I feel like there's double dipping in somebody and I'm not benefiting. So, but thank you.
A. Understood. I --- I would --- I would follow up that response with I would also urge everyone to understand the, I mean, the criticality of the --- of the reliability need that PJM has identified here. Again, this is not a lights dimming. This is not a, well, my power may go out for a couple hours. PJM is identifying an event here that we've seen three times over the last 20 years.
Q. And what is that?

CHAIR:

Let --- let --- let him finish.

A. Widespread outages events, critical elements on the transmission system that when lost, have the capability to cascade across the system. I would reference the Northeast blackout from earlier about 20 years ago. And then Southwest had something similar about 10 years ago where a single element was lost on the transmission system and it resulted in millions of people losing their

power for days, water systems being shut down, businesses closing. The economic impacts from those events have been measured in the billions. That's what PJM is seeing right now in their studies and they're doing everything in their power to try to prevent that from happening.

MS. EVANS:

And have they come out and talked to the local property owners about where the lines will be put to change this, so that it does come back into the feed for the local people? Thank you.

CHAIR:

Next intervener. Okay. No more interveners. Commissioner Larrick.

COMMISSIONER LARRICK:

I have no questions.

CHAIR:

Commissioner Raney.

COMMISSIONER RANEY:

Yes, ma'am. I've got a couple questions. Mr. Colley, nice to see you.

A. Good afternoon. Yes, sir.

COMMISSIONER RANEY:

Where are you from?

A. I'm from Birmingham, Alabama.

COMMISSIONER RANEY:

Well, I bet they think you talk funny down there.

A. They do. A lot of people talk funny down there. Yes, sir.

COMMISSIONER RANEY:

Yeah. You just don't sound like you from Alabama. I'm going to take you to Mr. Pawlowski's testimony. I got some questions there. The --- I got a --- I act like --- I can act like I'm smart, but I'm not going to. I could ask Google, but I'm going to ask you. What's nominal? What do you mean when you say nominal?

A. So yes, good question. So nominal just simply means that we are reflecting the total amount based on the years that I'm spending the dollars. So if I've got to spend --- if I've got to go purchase equipment in '26, I'm going to reflect the cost to you of what it costs in '26 when I have to write that check.

COMMISSIONER RANEY:

Okay. So it'll be consistent with each year?

Q. Correct.

COMMISSIONER RANEY:

Whenever you're going to spend it?

A. Correct. That's right.

COMMISSIONER RANEY:

Okay, good. Thank you. We've talked all around this thing and --- and hopefully in the next three or four days, we'll get to the bottom of it. But the initial bid, I guess, was adjusted to about $440,000,000 and ultimately came out to $1.16. Is that pretty close or ---?

A. That's pretty close. Yes, sir.

COMMISSIONER RANEY:

Okay. How many companies were involved in the initial bid? Do you know? In other words, how much --- NextEra was competing against how many companies?

A. Yes. I --- I --- I don't know the exact number. One clarification because I think this is important that I do want to make. We did multiple solutions, each of them different, to try to solve the problem.

COMMISSIONER RANEY:

Let me stop you there. When you say that and you said there were 112 or something like that and you did 26. Did you have to bid each one individually?

A. We did, yes.

COMMISSIONER RANEY:

So everyone else did as well?

A. Correct.

COMMISSIONER RANEY:

And someone on the side adds all that up

and that's where you came up with $440,000,000?
A. No, sir. The --- the one that was selected, the project that they selected, the ultimate cost of that ended up being the $441,000,000.

COMMISSIONER RANEY:

And it was made up of the 26 violations and 26 things you were supposed to solve?
A. No, sir. No sir. Let me clarify. So PJM, as part of this process, they --- they --- they tell everybody here are the problems that we're seeing and they share those models with entities who want to submit solutions. So we went and ran a bunch of different studies, power flow studies, to identify different solutions. We --- we identified initially over 1,100 possible solutions. We narrowed that down to 26 unique different possible solutions. Out of that list, PJM chose MARL. Other companies would have submitted their own solutions that --- that would not have looked the same as MARL. We were not bidding on the same exact project. It was whatever they identified to try to fix the problem. What PJM came back and said is MARL --- MARL had the best electrical solution to the problem that they had identified in their models. So that's why it was chosen.

COMMISSIONER RANEY:

Well, I've, all the time, talk about

people spending multiple careers to try to make this as complicated as they possibly could. And I don't know if you're a historian or not, but how did all this work before it got so complicated? I mean, how --- how did we ever get electricity to the house ---

A. That's a great question.

COMMISSIONER RANEY:

--- without all these acronyms.

A. That's a great question. It's been complex in my 25 years in the industry, so I don't know --- I don't know how it used to be done.

COMMISSIONER RANEY:

Well, I was hoping you had the answer.

A. I wish I did.

COMMISSIONER RANEY:

Now, let me go to Mr. Pawlowski's testimony, if you don't care. And I'm with Ms. Evans on this stuff. I can't --- I can't figure out. This --- this is going to answer a bunch of the questions that I've got. And I'm exactly where Ms. Evans is. I'm making power up here in Morgantown at Fort Martin. And I've got --- over here in Pennsylvania, I've got a substation. I've got one over here in Maryland and this thing's run --- MARL's running across the top of it. How's that electricity get from Fort Martin to where it

does us any good? And you talk about in one of --- either your Rebuttal or Mr. Pawlowski about this bidirectional and two way stuff. Now, you got to do it in fifth grade language because I'm telling you, I --- I just don't get it.

A. Understood, understood, yep. So I'll do the best I can. If you think about this system, just think about it from the water that's running in the pipes in your house.

COMMISSIONER RANEY:

Okay.

A. If there's a portion of --- of that system in your house that experiences low pressure or even no pressure, the water's not going to flow and that's what PJM is seeing. That's --- when we say voltage, words like voltage, that's what that means.

COMMISSIONER RANEY:

Okay.

A. There's no pressure on the system to allow the power to flow. So even though you may have a generator and you may have your loads nearby, you are interconnected to the broader transmission system. And if there is a major pressure drop, then that will affect the people of West Virginia. So what PJM studies are showing, the MARL line is helping to supply that pressure, to maintain that pressure, so that everything continues to flow right.

COMMISSIONER RANEY:

On --- on two substations?

A. Correct.

COMMISSIONER RANEY:

On both ends of this thing?

A. Correct, correct.

COMMISSIONER RANEY:

So that's going to help Fort Martin to get to what, Black Oak or get to the one in Pennsylvania or get to the one in Virginia?

A. Yeah. One --- yeah, one clarification. You said on both ends. They're actually in the middle. So you've got the 502 Junction. That's the --- that's the source of the line. Then it goes to Black Oak, then it goes to Woodside, and then it goes to the end point after that.

COMMISSIONER RANEY:

Where's Black Oak?

A. Black Oak is in Maryland.

COMMISSIONER RANEY:

Okay. So Fort Martin's got to get to Black Oak or 502?

A. Uh-huh (yes). Uh-huh (yes).

COMMISSIONER RANEY:

And it's --- it's plumbed up to get to that point, yes?

A. Correct, correct.

COMMISSIONER RANEY:

Okay. That's getting me closer, but I'm not sure I'm there yet. What happens if they don't build Woodside?

A. So if Woodside --- Woodside is a major component of the project ---

COMMISSIONER RANEY:

Right.

A. --- as we said. It's providing that pressure that you need on the system. Woodside actually has two, what we refer to as STATCOM devices. They --- they provide dynamic voltage support, meaning it can kind of adjust and react based on what the system needs are at the time. So Woodside is a critical component of the project. If --- if Woodside were deemed to not be built, we would coordinate with PJM on, is there another location where a substation could be built that could provide the same benefits? We would just need to pull up with PJM at that point about what we do.

COMMISSIONER RANEY:

Perhaps you're not the right one to ask, But I asked Ms. McCormick this morning if it's ultimately determined that you're not going to be able to recover your cost in West Virginia, will MARL go on and will it

be paid for by Maryland and Virginia and Pennsylvania?
A. Similar answer to what I just said we would. We would --- we would need to pull up with PJM on what the appropriate next steps would be and how we would --- what we would do. But again, I would also go back to what I had previously stated about MARL is providing value to West Virginia. Dr. Abdulsalam can --- can walk you through even more the specifics, but there is value there. But if --- if the decision was made in West Virginia, we had to do something different, we would just need to talk with them about scope.

COMMISSIONER RANEY:

Okay. Now, let me see here. Page six of Mr. Pawlowski's --- Mr. Pawlowski's not a Ph.D., is he? Is he a doctor? I'm referring to his training. Well, again, I --- I think some of these are repetitive and I apologize for that. But everything seems to be keyed to, you know, it's either happening in Maryland or it's happening in Virginia and we just happen to be caught here in the middle. Is that pretty much true? I mean, it's --- does anything happen east of Woodside?
A. Yes, yes. There's --- there's a significant component east of Woodside that's ---.

COMMISSIONER RANEY:

Into Virginia?

A. It's taking the energy through, down through Maryland and then subsequently terminating in Virginia, yes.

COMMISSIONER RANEY:

Okay, all right.

A. But I --- I would --- Commissioner Raney, I would --- I would reiterate what I said earlier about I don't view, and I don't think Dr. Abdulsalam would view this project as --- as an extension cord just passing through West Virginia. There is value to West Virginia. And what we talked about and then what I referenced a few minutes ago from the critical regional problem that they're seeing in their models, West Virginia would be affected, definitively be affected by that if it happens. And so a big part of MARL is trying to prevent that, to keep the lights on, to keep people from having to deal with an extended outage for --- for days that could happen.

COMMISSIONER RANEY:

Okay. Go to page 13 of Mr. Pawlowski's testimony, if you would. Line, let me see, 4 and 5 and then I jump down to lines 15 and 16. And I'm just curious. First of all, you talk about provide regular updates to its stakeholders. Who are the stakeholders?

A. So stakeholders are anyone who wants to participate

in those meetings. So it's other --- other utilities, folks who have bid --- bid the solutions we talked about earlier. They are there. But --- but others who are not part of that group, they are there as well. Landowners can and do and regularly provide input and feedback.

COMMISSIONER RANEY:

Well, I --- the general definition of stakeholders, I understand that. In this context, it says in addition to the company's analysis of its proposal prior to submitting the PJM, was the MARL project subject to stakeholder review? Yes. Consistent with PJM's RTEP process, PJM provided regular updates to its stakeholders. So do I need to ask the fellows from PJM who they specifically are? Are they PJM employees. Are they NextEra employees? Are they --- or is it yes to both of those?

A. It's yes to both of those. And all of the folks who participated outside of those two companies, all of the folks who participated in the multiple TEAC meetings that were held during that --- during that process of PJM selecting MARL as the solution to the problem.

COMMISSIONER RANEY:

Do you suppose PJM included anybody in the public in that process?

A. The public was included and --- and there were folks

that participated, yes.

COMMISSIONER RANEY:

Where'd they come from? You have any idea?

A. I --- I --- I --- yeah, I don't know specific individuals. But I do recall that hearing there were specific individuals that either on the phone or in person gave --- gave their feedback.

COMMISSIONER RANEY:

It says so that ---

A. Yep.

COMMISSIONER RANEY:

--- PJM answered numerous questions of members of the public. And I would have not have known that having gone to four public hearings in West Virginia.

A. Yes, sir.

COMMISSIONER RANEY:

That's --- all right. Let me see. Go to page 15. Go down to line 13 on page 15 of Mr. Pawlowski's testimony. And said following these discussions, the entities agreed to propose a change in scope for a portion of the MARL project located in Virginia to take better advantage of existing transmission lines right of way. Only in Virginia

was ---?
A. Yeah. So this --- this is the part that east of Woodside, there was an opportunity to --- we --- we --- we tried to find the most efficient solution that would be best for PJM rate payers. And this is where we collaborated with FirstEnergy and Dominion, identified that they could finish out the project utilizing their existing rights of way. After a discussion with them and with PJM, it was determined that was what was best for ratepayers. It actually ended up being, you know, over $100,000,000 less scope for us, but it was the right thing to do, so.

COMMISSIONER RANEY:

Okay, all right. I think they --- they asked you the percentage. You said the percentage that Ms. McCormick talked about in terms of paralleling right of ways was over the whole line, the 102 miles.
A. That's my understanding.

COMMISSIONER RANEY:

Somewhere around 50. But on page 20, Mr. Pawlowski references that proposal number eight, transmission line that parallels several existing lines. I presume that all of those lines have been approved by the current landowners and are existing and are sitting there and they're active and they're operating, those

listed in lines four through eight.
A. That is my understanding. Yes, sir.
COMMISSIONER RANEY:
Okay. That's --- and I go back and I'm going to be repetitive and apologize right now, but I still go back to my visit to the farm in Fort Ashby. And Ms. McCormick, she answered the question and I'm sure she understood her answer, but I'm still struggling to get to the --- there's a line sitting there. It's going to be deactivated and they said, well, we can't do it because we're in competition. So does that mean that you can't sit 100 feet on the other side of it and --- and operate it or does that just mean, well, we just took it out of consideration as a possible route?
A. Understood. During the --- during the bidding process --- I think we talked about this earlier. So before PJM makes its decisions, we're very limited in the ability to talk to other people about other companies because we're in competition with them for the --- for the project. But afterwards, as --- as we just ---.
COMMISSIONER RANEY:
No.
A. Yeah.
COMMISSIONER RANEY:
I mean in the bidding process ---.

A. Yes, that's during the bidding process.

COMMISSIONER RANEY:

We're presuming ---

A. Yeah.

COMMISSIONER RANEY:

--- that this conversation occurred during the bidding process. Process.

A. Yeah. I don't know if it did or not. But what I can say is afterwards, we do look and we have looked to optimize and be as efficient as possible. We just talked about what we did east of Woodside. I know that Ms. McCormick did a thorough job of looking at the rest of the route for where we can, to --- to the extent possible, utilize existing ride of way. I do know that a lot of what was identified of potential options for that would have resulted in the displacement of homes, which is something we don't want to do.

COMMISSIONER RANEY:

Right. I understand. I agree. She's been very thorough.

A. Yeah.

COMMISSIONER RANEY:

That's --- all right. Let me see here. I think that answers itself on page 23 that you don't want to take things out of --- you don't want to deactivate

lines because it would create more problems than it would ever solve. Is that ---

A. Yeah. When you ---.

COMMISSIONER RANEY:

--- the way I understand it?

A. That's right. When you've got a --- an area that is already seeing issues and is already seeing potential voltage, low voltage, potential facilities exceeding their thermal rating, the last thing you want to do is take some of those existing facilities out because it --- just think about an interstate. If you shut down a major interstate that's got a lot of traffic on it, all of the other highways have to be able to support what's flowing on that. And right now, what PJM is saying is they can't do that.

COMMISSIONER RANEY:

All right. That gets me through Mr. Pawlowski. Let me look at a couple things in your Rebuttal Testimony, if I may. I presume --- looking at page seven and Mr. Egnatoff's four reasons that the need has not been demonstrated for West Virginia, that you, as stated here and the doctor to follow you, Mr. Graybill (sic), disagree wholeheartedly with the four reasons. Is that --- do I ---

A. I do.

COMMISSIONER RANEY:

--- interpret that correct?

A. Yes, yes, I do. PJM studies, they test it every year. So this --- it's been --- it's been reverified now four years over. And each of those studies have continued to reinforce that the problem that they're seeing and the critical need for this line.

COMMISSIONER RANEY:

So you all don't feel any of these have any credibility? Do I read that correctly or am I reading too much into this?

A. Well, you know, I think it's just a clarification of, you know, yes, there are other lines that have been identified, but those lines are not needed in replacement of this project. They're needed on top of and to help reinforce this project. As it relates to the Brandon Shores and Wagner units, the fact that they're running right now, again, they are helping provide a bridge to a permanent solution, but they are not the permanent solution.

COMMISSIONER RANEY:

Yeah.

A. So it's more of a clarification.

COMMISSIONER RANEY:

The one I look at, Mr. Colley, is the what

if that Mr. Egnatoff raises about the political aspect of these things. And I think you got Woodside sitting over there --- I don't know. I mean, I can presume what the attitude is in Virginia about all this stuff, but I don't know that for a fact. But politics plays a whole big role in all of this stuff. And that seems to me to be a very legitimate risk that I don't know exactly how you quantify, but nevertheless, I think it is a credible concern.

A. I think --- I think there's just a lot of unknowns. Right. I think you characterized it very well. I think there are unknowns. But I also think what PJM studies have clearly shown is there's not a single load or, you know, a --- a --- a handful of loads that have created and are driving this problem. In fact, it's not just loads. I mean, PJM has been clear about that. It's a combination of loads. It's a combination of the retirements that have taken place and it's a combination of just a degradation of the voltage that they're seeing on the system right now.

COMMISSIONER RANEY:

You suppose PJM thought about all that when they let all those coal plants and gas plants shut down over the last ten years?

A. Yeah, I --- I can't speak to that.

COMMISSIONER RANEY:

I don't expect you to. Thank you. Page ten, that goes back into the Brandon Shores and Wagner and the forecast and all of that. So that's the politics of that. I think everything else would be repetitive, Mr. Colley. I appreciate it very much. Are you pleased with Alabama's football team?

A. It's a new life for us right now after our favorite West Virginian decided to retire a couple years ago.

COMMISSIONER RANEY:

Yeah.

A. But we're making it.

COMMISSIONER RANEY:

Yeah. It seems like you all ---.

A. Yeah.

COMMISSIONER RANEY:

Yeah, it sure does. Thank you, sir. Appreciate that. Thank you, Madam Chair.

CHAIR:

I have a few questions. When you are looking at the different models and the different scenarios and trying to come up with trying to be what PJM had identified as --- as a need, were there any of those projects or models that did not go through West Virginia?

A. I can't answer that, Madam Chair. I was --- I came onto this project at the time it was awarded. I can't speak to all of the projects that were identified as part of the original bid.

CHAIR:

And as I understand your testimony, the --- the two substations, one at Gore and one at East ---?

A. It's Black Oak and Woodside.

CHAIR:

Yeah, Black Oak and Woodside. Now, are those going to be new substations?

A. Woodside is a new substation. Black Oak --- Black Oak, I believe, is a new substation as well.

CHAIR:

In all of these proposals, did anybody propose any substations in West Virginia?

A. That'd be a question for Dr. Abdulsalam. I'm not sure. What I can say, though, Madam Chair, is I --- I don't know the specifics of all the other bids, but I do know, and again, Dr. Abdulsalam can speak to this, that --- that the primary reason that MARL was chosen is because of the electrical benefits it provides to the system, of which a major component is the substations at Black Oak and at Woodside.

ATTORNEY AUVILLE:

Your Honor, I'm going to have to make --- get a clarification at this point because the Black Oak substation already exists. It's a substation at Woodside and a substation at Aspen.

A. Yep, yes. I'm sorry. That is a good clarification. I'm sorry. Black Oak --- Black Oak is existing. The 500 line will be tying into it.

ATTORNEY AUVILLE:

Yes. And that's another point of contention because Dr. Abdulsalam, and he can answer this question, but the application says that they will connect to --- to Black Oak, but Dr. Abdulsalam says it will bypass Black Oak. So I'm not sure which one is correct.

CHAIR:

Okay. Now, are you an electrical engineer?

A. I am an electrical engineer.

CHAIR:

Okay, good. I --- so I can ask you these questions. What difference does it make if the substation is in Virginia or West Virginia?

A. So there is certainly some immediate benefits depending on where you are. But I mentioned this earlier. Electricity doesn't recognize state boundaries. It's going to flow on the path of least resistance. So

if there is a substation just across the border in Virginia, but electrically, there's not a lot of load or stations kind of nearby, it will provide a significant amount of electrical value to West Virginia. So just because it's located across state lines doesn't mean it won't provide value. It's really a function of what is the electrical load in between that substation and a specific location.

CHAIR:

So isn't the reverse true, then? The substations could be in West Virginia and the load can come from Virginia into their substations?

A. I --- I think that's certainly plausible and it's not part of the existing project, but I know that there --- there is the possibility in the future for a West Virginia substation as part of this line.

CHAIR:

Do you have to have a specific project or a specific load in order to locate a substation?

A. So Dr. Abdulsalam can walk through the process of adding a new substation. There's a couple of different processes that PJM has to do that. There's the existing RTEP process that we've been talking about. There is a separate process they have for connecting individual loads that can drive a substation.

CHAIR:

Now, if there were to be additional generation in West Virginia, would this transmission line be needed to get any of that electricity to customers, or if additional generation were built, the existing transmission lines that we have now would be sufficient to get that load to market?

A. Yeah. It's --- it's hard for me to answer that question without knowing specific locations. And even then, it's --- I can't really run power flow studies in my head. But Dr. Abdulsalam knows the system and I think --- I think he would be able to better tell you, just in general --- just in general, if additional generation in West Virginia would have a significant impact. I do know that, as PJM has reported, going back to what we previously talked about, the voltage, the depressed voltages that they're seeing in their studies, when that voltage gets too low, it doesn't matter how much generation you have in West Virginia. Power cannot flow across lines if you don't have an overall voltage supporting the entire system. So I would just caution with that, but in terms of specifics, I think Dr. Abdulsalam can --- can answer that better.

CHAIR:

Okay. I'm going to make one more run at

this.
A. Okay.
CHAIR:
I'm as bad as Commissioner Raney. I still don't understand how this project got from $440,000,000 up to $1.1 billion dollars.
A. Understand, understand. Okay.
CHAIR:
What would $440,000,000 do?
A. So, yes. Let me --- let me walk you through what happened. So the $441,000,000 was after the scope change that occurred east of Woodside that we talked about. But at that time, all we had done is a --- it was a conceptual planning level estimate that was developed during the 60 day time frame. So after that, we had a chance to then go perform a routing study to actually get it --- to get a full route. And then we had a chance to do actual design and engineering.
So I'll give you a couple of examples. It's --- it's more complex than this, but just a couple examples of how costs can go up very quickly. So from the time that MARL was awarded to us, materials almost across the board have gone up by 25 percent. That's just inflation. Copper, for example, has gone up 50 percent just in the last three years. So that's affecting everybody in the

industry. So material costs have gone way up.

When we performed the routing study, again, Ms. McCormick helped to minimize as much as possible disruptions to the community to try to identify the most efficient route possible. When we did that, we added over, I think it's 150 turns. And every single turn on a 500 kV line like this is over $1,000,000 extra and it makes the route longer. So those are a couple of examples of how your costs can very quickly go up.

But one clarification, Madam Chair, that I would say. The --- the --- the base cost of project as we sit today is $844,000,000. I --- the full number is the number you referenced. But just remember, that includes $115,000,000 of contingency that we're holding there just in case there's anything else may happen. Does that help?

CHAIR:

It does, but explain to me why I am wrong when I think that you all got the low bid and there were other people out there bidding that were higher and lost because it was a higher bid. And if they had gotten the bid at the higher bid, we may say still be less than $1.1 billion dollars.

A. Yeah, understood. So a couple things I would say there. We did not win the bid primarily because of the

cost. And Dr. Abdulsalam, you should ask him and I think he'll verify this. We won the bid because MARL was the best electrical solution for the area and solve the reliability problem that they were seeing. Even if our cost --- even if we had known and been able to predict and forecast that our ultimate cost was going to be $844,000,000 and we put that number in the bid, I can say confidently we still would have been selected. And I say that because we have the best electric solution and the $844,000,000 is very closely aligned with PJM's independent estimate that they ran for what they think this project should cost. That's when they produced a number of about $830,000,000. So our costs have gone up to about what they thought it should and they selected us anyway, again, primarily because it's the best electric solution for the region.

CHAIR:

Mr. Callas, any Redirect?

ATTORNEY CALLAS:

Thank you, Madam Chairman. Yeah, I just have a few.

REDIRECT EXAMINATION

BY ATTORNEY CALLAS:

Q. Let's start with the bid discussion again. This Commission entertains a lot of water, sewer line

projects. And they --- you come in for a certificate to do a water sewer line project and you have a projected cost. And the Commission's order always says once bids come in, if you're going to spend more than what you said in our certificate and that we authorized in the certificate order, you need to come back in if there's a bid of overrun. So projects get their certificates. They go out to bid and, you know, the lowest qualified bidder may be more than that and they have to come in and get approval for that additional amount. And in that situation, you have a set of plans and specs that is presented to the bidding community and contractors and they look at it and they are all bidding on the same thing. And it's from those sealed bids that are responsive to that package that the lowest bidder who's capable is selecting.

A. Well ---.

Q. Can you tell --- can you tell us how that situation, that set of events and use --- the use of the term bidding is different than what MARL was doing in responding to 2022 Window 3?

A. Yes. So it's --- it's very different. PJM did not have a single project spec that all participants bid on. And so it ultimately came down to who was the lowest bidder. That's not what happened. PJM identified the

problem and they asked all participants to identify solutions, submit those solutions. And as part of what you submit, yes, you do put a cost estimate on it. But --- and so what PJM receives is a bunch of different solutions that don't have the same electric benefit to the system. And so then it's on them to select which one provides the most electrical benefit.

Q. Let me interrupt you for a second.

A. Yeah.

Q. And they don't have the same components either, ---

A. That's correct.

Q. --- the same facility?

A. That's correct.

Q. Lots and lots of different kinds of facilities. Is there anybody who was bidding on the same set of facilities ---

A. No.

Q. --- that you were bidding on?

A. No.

Q. So you're not bidding against anybody else on an apples to apples basis?

A. That's correct.

Q. Okay. I'm sorry. I cut you off. Did you have more to say?

A. That's okay.

Q. Okay. Black Oak, we --- we've heard some --- some discussion about what --- what is happening at Black Oak. Can I point you to the DEA Attachment B to the application? Yeah. The book with the folded pages that's wavy. That's how I'm identifying it on your witness stand up there. And if you could go to Schedule A to the DEA or B, they're kind of the same, on page --- Bates page 93.

A. Yes.

Q. So, we --- we've heard it said, and it's accurate, Black Oak is an existing substation, not a new one. You clarified that.

A. Yes.

Q. We've heard it said, well, Dr. Abdulsalam says you're bypassing Black Oak. And we've also heard it said from you we're connecting to Black Oath. We've also heard you say, and --- and it's represented in the testimony, that there was an initial project and then there was an amendment to the DEA ---

A. Yes.

Q. --- where we came back and added some additional scope that was different than the initial cost estimate. I'd like you to look at the baseline upgrade IDs on this table. And can you identify which of these baseline ideas --- IDs, project IDs was the last to come in?

A. Correct, yes. It is the one at the bottom of the page, B4000.14.
Q. Okay. And --- and can you --- can you explain what the description of that is and what is actually happening at Black Oak?
A. Yes. So the description for that scope is to install two new structures that would interconnect the MARL line into Black Oak. And so that was --- that scope was added to the project as part of in a follow-up RTEP process that PJM performed after the project was originally awarded.
Q. Okay. And I --- I --- we will allow him to speak to it, but to the extent Dr. Abdulsalam says Black Oak not --- not involved initially, that would have been true in that context ---
A. Correct.
Q. --- but not later?
A. That is correct. Originally, Black Oak was not part of the original solution. But in subsequent years, PJM saw the benefit of it, recognized it and added it to the scope of the project and amended the DEA to include it.

ATTORNEY CALLAS:

Okay. That's all I have. Thank you.

CHAIR:

Okay, thank you. Thank you, sir. You may

be excused. And we are going to take a 15-minute break and when we come back, we will have Dr. Abdulsalam. I probably really messed up that name, but I'll try harder. Thank you.

SHORT BREAK TAKEN

CHAIR:

You all may sit down.

ATTORNEY CALLAS:

Madam Chairman, if I may, a process point. It is now quarter to 4:00. We have two witnesses left. Do you expect that we will go as long tonight as it takes to complete those two witnesses?

CHAIR:

I'm hopeful that we can.

ATTORNEY CALLAS:

Thank you.

CHAIR:

Do you want to call your next witness?

ATTORNEY CALLAS:

Yes. NEET MA's next witness is Dr. Sami Abdulsalam.

COURT REPORTER:

Can you please raise your right hand?

DR. SAMI ABDULSALAM, HAVING FIRST BEEN DULY SWORN,

TESTIFIED AS FOLLOWS:

DIRECT EXAMINATION

BY ATTORNEY CALLAS:

Q. Good afternoon, Dr. Abdulsalam.

A. Good afternoon.

Q. Please give your name and business address for the record.

A. My name is Sami Abdulsalam. My business address is 2750 Monroe Boulevard, Audubon, Pennsylvania.

Q. How are you employed?

A. I am the Senior Director of Transmission Planning with PJM.

Q. And in that connection, have you been requested by NEET MA, the applicant here, to sponsor Direct and Rebuttal Testimony in support of the relief requested in the application?

A. Related to the need and revision of transmission expansion plan, in short, known as RTEP process.

Q. Okay. Do you have copies of that Direct and Rebuttal testimony in the binder there to your left?

A. Yes, sir.

Q. Are there any changes you believe need to be made to either piece of testimony to make it truthful today?

A. None that I'm aware of.

Q. Okay. Do you ask the Commission to accept that written testimony as your sworn testimony in this case?
A. Yes, please.

ATTORNEY CALLAS:

Okay. With that, Your Honor, the testimony having been admitted, I offer Dr. Abdulsalam for Cross.

CHAIR:

Mr. Hanna.

ATTORNEY HANNA:

Yes, thank you.

CROSS EXAMINATION

BY ATTORNEY HANNA:

Q. Hello, Dr. Abdulsalam. I'm David Hanna, Counsel for WATI. The MARL project, PJM selected, in part, due to projected load growth in Northern Virginia and Maryland associated with large data center loads. Is that fair to say?
A. The load growth, part of which PJM initiated needs in the 2022 Window 3 is just a partial drive, although it can and in some instances it occupies a large portion of the need. But the need is driven by three primary drivers that you can ---- you can say even four. And these are basically, as you have mentioned, the load growth, particularly associated with or with respect to

the load growth happening in the --- in the west. I mean the load growth in eastern PJM that includes southern PJM, Dominion and parts of PECO, PEPCO in Maryland, as well as the MidAtlantic portion. The other driver is the retirements that we have experienced in PJM over the last several years and even since the opening of the window itself, which ramped up to approximately 11 gigawatts of generation, generation capacity. And there is another aspect that seems to be, to some extent, forgotten, which is the impact of the resource mix evolution, meaning the composition of the resources on the PJM footprint together with the nature of the load that connects in PJM, how that may impact the flows on the backbone of the --- of the interconnected systems. So --- so these three factors together played a major role driving the need. And then there is a slight need driver through the electrification load. But that's small compared to the other remaining drivers.

Q. Well, the --- the drivers associated with the growth of data center loads, it's been --- now, this is in Mr. Gledhill's testimony and it may be somewhere, it was described as that the PJM observed that the data center loads within Northern Virginia were projected to continue increasing at an unprecedented rate. Is that --- is that fair characterization?

A. That's a pretty fair characterization and it does not only apply to PJM footprint. It applies to most of the nation, as is the case for Texas and California and other entities, not ---.
Q. So can you characterize just how the --- how that load growth associated with data centers is --- how --- how different that is that we're facing right now? Was --- was that comparable to anything we've had in the past?
A. This is an unprecedented time in --- in our nation electricity sector, as well as internationally. The amount of load growth, the nature by which it's growing and how fast it's growing year over year poses unique merits, if --- if --- if not challenges. As I had mentioned, as Mr. Gledhill might have mentioned in his testimony, our historical growth of load in PJM outside of booming times was sub one percent. We are currently talking between three, three and a half, and five percent and maybe more year over year.
Q. Does PJM independently verify any of the projected data center loads to --- as far as a specific project?
A. Yeah. Now, you are delving deep into the wheelhouse of Mr. Gledhill and I would love to give him the opportunity to cover that in details when his time on the stand comes up.

Q. Are you --- okay. I will do that. If people keep pushing --- naming other witnesses, eventually we're going to run out of witnesses who's going to answer some questions. But I think, I think --- I think --- I think you'll be up here for a little while.

You do mention --- I want to refer to part of your testimony. Make sure I get the correct page. Page 136 of your Rebuttal Testimony.

A. If you may, please.

Q. Do you have them?

A. Yes. Okay.

Q. So reading on --- line seven, and this is respect to proposed benefits of MARL in West Virginia. It states that --- in your testimony here, your Rebuttal, that PJM does not conduct a separate state specific benefits analysis to determine whether reliability project provides a particular level of economic or other benefits to each state in which the project is located. Is that --- that's correct?

A. I don't want to answer with a simple yes or no because there is some context around that that I would like to provide. It is not a requirement by the approved process for the RTEP for PJM to conduct a quantitative benefits analysis for reliability based products. And there is a unique or a set of unique reasons for that.

When we talk reliability needs, we are talking needs that drive the continuity and the safe operation of our integrated regional grid. We are talking in continuity to a prescribed standard of service to hospitals, to police stations, to fire departments, to the traffic lights, to airport operations, etcetera, etcetera, etcetera. And it has been proven that when your reliability is comprised and --- compromised and your people or the public loses electricity for an extended period of time, that could be associated with life loss. We cannot put a quantitative value to that, especially if the need drivers are obvious and reasonable, which we believe the case is here. So, in short, for liability projects, FERC and PJM criteria does not require us to quantify benefits directly, neither global to the PJM interconnection or to specific states or specific LSE's, but the benefits we do consider on a qualitative basis when evaluating the projects.

Q. But like you say, the economic benefits, you're not required to do an evaluation, a state specific study on that; is that correct?

A. For reliability projects, yes. For market efficiency projects where we are weighing economic benefits right and left, not safety, not loss of life, there we can do some quantitative assessments.

Q. So can you turn to page 1747, that's Bates, of your Direct Testimony?
A. Yeah.
Q. So the bottom of the page and continuing onto the next page, you're responding to a question about whether there are any details you'd like to provide about the benefits of the MARL project for West Virginia. And --- and --- and you list some proposed benefits, but it's fair to say that those --- what you're talking about benefits, that's not a result of any sort of state specific or West Virginia specific benefit analysis. It's not an analysis. You're just --- you're --- you're listing some items that you think might be a benefit or provide opportunities for benefits in West Virginia. Is that fair to say?
A. I disagree with that characterization for the following reasons --- and I thank you for giving me the opportunity to clarify this matter. And I'd like to use an analogy to simplify as per the request of Commissioner Raney and other Commissioners to simplify the --- the --- the gist of the benefits that MARL provides to West Virginia. To start with, the analogy here that I'm going to use is an interstate highway that goes through a specific state. Normally, it will have off ramps and on ramps that connects that interstate highway to cities

like Weston or Morrisville, two beautiful cities that I drove past driving here from Pennsylvania. When you have an interstate like that and the traffic continues to grow on it, it leads to congestion that casts its impact on not only the interregional or the state or interstate needs, in terms of moving merchandise or moving people or ease of commute or saving fuel, but it also poses lots of inconvenience to folks who live in the intermediate off ramps and on ramps utilize that highway.

Now, when --- when the federal government or the state government initiates a project to build another highway to parallel and offload the existing highway with off ramps and you do not introduce new off ramps, the result is going to be that the flow on the original highway is going to go down and people will start to experience less congestion, less safety issues, shorter commute times, more efficiencies. I think that is very close to what's being proposed here by introducing MARL through West Virginia without necessarily having substations inside West Virginia.

People of West Virginia might not see the electrons flowing and the amount of loading on these lines because they are silent, they do not speak, but that doesn't mean that these lines are being overused and over utilized today to an extent that we have started to take emergency

steps to preserve as many generators that we could do through either reliability must run contracts that are quite expensive or through utilizing federal powers through the 202C or to prevent generation from retiring. These impacts are there. They will have economic impact impacts that are felt today by the people of West Virginia and across the interconnection in PJM. What MARL together, part of a more integrated plan for PJM offers is that it offers a relief of such impacts, especially not for only the conditions of today, but also for the horizon of the planning --- sorry, for the time frame of the planning horizon that PJM plans to. I hope that this helped clarify the need a little bit more.

Q. Dr. Abdulsalam, you state in your --- the same page here , your page 9 or 1748, you were talking about that MARL could serve future loads along its route in West Virginia, for instance, data centers or industrial customers; is that correct?

A. Absolutely.

Q. But you're not aware of any specific project in the --- in the development or planned development in West Virginia that would --- that would --- along the MARL route that would be served by MARL. Is that fair to say?

A. I am aware of data projects like new power plants that are proposed to push power from Western PJM to

Eastern PJM that will benefit from the existence of MARL and other planned infrastructure in PJM.

Now, I understand that planning sometimes can feel, and this is a word --- a word that I really hate, speculative to the non-planner. But planning has to be proactive based on credible reasonable assumptions in the future. There is no doubt that the whole world, including the United States, is moving in a direction of artificial intelligence superiority and more data centers are getting built. And PJM's load, similar to other RPO's and ISO's is increasing because it is materializing. This technology offers an economic opportunity that will get attracted to areas where the infrastructure is available. MARL offers, similar to other transmission infrastructure projects, offers that availability of infrastructure for people to use and for economic development to materialize, both on the load side and on the generation side.

Q. Those reasons were not --- that's not a purpose for which MARL was --- is being constructed though; is that correct?

A. I'm responding to a hypothetical scenario that you brought up, Mr. Hanna.

Q. The hypothetical scenario, if there were --- if there were --- that you're --- that you're not aware of

any specific projects, data center projects or --- or industrial projects that would be served by MARL?
A. There --- there --- there are none there. One the reasons why, as I tried to allude to, that West Virginia is one of the states within PJM with the least amount of backbone transmission covering its footprint. So the landscape of West Virginia, if you take a look at the map, where overlay of backbone 500 kV transmission, it will be one of the least covered states with infrastructure.
Q. Do you know why that is?
A. Because early on, there was not economic development happening or driven within the state of West Virginia that necessitates the planning authority like PJM to propose additional lines. And by the way, to correct the record, PJM has repeatedly and not in a very distant future --- past brought forward key transmission infrastructure similar to PATH and trail, one of which got energized --- and PATH did not proceed because the driver for that project did not materialize, so --- and PJM then canceled it. So there is activity and there has been activity in West Virginia to enable developmental generation and development of load in the past.
Q. Do you think the landscape or the mountainous area has been any sort of barrier to that sort of development

of a backbone?
A. I'm a planner, but based on engineering judgment, that could have played a role.

ATTORNEY HANNA:

Yeah. Thank you, Doctor. I have no further questions at this time.

CHAIR:

Mr. --- Mr. Harkins.

ATTORNEY HARKINS:

I have no questions for this witness. Thank you.

CHAIR:

Mr. Williamson.

ATTORNEY WILLIAMSON:

Yes, ma'am.

CROSS EXAMINATION

BY ATTORNEY WILLIAMSON:

Q. Good afternoon, Dr. Abdulsalam.
A. Good afternoon.
Q. I represent the West Virginia Energy Users Group large manufacturing and industrial consumers. How long were you in Edmonton, Alberta?
A. Very long time. So I have spent almost 18 years in Alberta. I'm a proud Canadian.
Q. Well, good, excellent.

A. And I'm an Oilers and a --- and a Calgary fan, too.

ATTORNEY WILLIAMSON:

I spent three weeks there outside on a military field exercise, but it was --- it was pleasant. We're going to distribute two exhibits, Cross Examination exhibits that I'll identify.

CHAIR:

Thank you.

ATTORNEY WILLIAMSON:

I think she took mine. Did you take mine?

CHAIR:

No.

ATTORNEY WILLIAMSON:

Thanks. Your Honor, we're going to label the --- the full map of PJM, so that's the one without any other large writing on it, as WVEUG Cross Exhibit 1. And then we're going to label the other one that has the PJM emblem in the upper left-hand corner, talks about Southern MAAC, we're going to label that WVEUG Cross Exhibit 2.

(WVEUG's Cross Exhibit 1 was marked for identification.)

(WVEUG's Cross Exhibit 2 was marked for identification.)

CHAIR:

May be so marked.

BY ATTORNEY WILLIAMSON:

Q. Do you happen to recognize these two exhibits?

A. Yes.

Q. Okay.

So you --- you sponsored those in --- in response to our questions. The first was in response to WVEUG set three, question five. And then the second was in response to WVEUG set three, question three. And you would acknowledge that these represent what you purported that they represent, a map of the PJM zones and then a more concentrated map showing the SWMAAC locational deliverability area?

A. Yeah, for the SWMAAC, we call that Southwest MAAC.

Q. Yep, Southwest MAAC. And that's what you referenced it as in your response?

A. Yes, sir.

ATTORNEY WILLIAMSON:

Yeah, okay. Your Honor, remove the admission of these Cross Examination exhibits and we'll proceed with a couple of questions.

CHAIR:

Yes. They may be admitted into the record.

BY ATTORNEY WILLIAMSON:

Q. Dr. Abdulsalam, with respect to WVEUG Cross Exhibit 1, although it's not as legible as I had hoped, this --- this identifies each of the transmission zones with than PJM; correct?
A. To my understanding; correct.
Q. And --- and there are about 21 or 22 transmission zones in PJM?
A. I think we have 27 transmission zones.
Q. Oh, 27 now. So that's been updated, yeah. And are you familiar --- I'd asked a question of Mr. Colley. Are you familiar with how costs associated with the MARL line would be allocated? And there's --- I know there's another witness address this too, but I'm just curious if you're aware of it.
A. No, there's no other witness. My department is responsible for implementing the cost allocation mechanism that is owned by PJM transmission owners. The 27 LDE's that you mention and approved by the federal regulator FERC.
Q. And, and so the --- the cost associated with MARL, if receives all of its certifications and --- and whatnot, will be allocated to each transmission zone; correct?
A. MARL is a regional transmission project that follows a rule of cost allocation. To simplify, 50 percent of

its cost gets allocated based on utilization percentage. So if zone X utilizes the line by 10 percent, then it will get 10 percent of the 50 percent associated with allocation per use. And then the other 50 percent gets allocated based on load share ratio. It will be the load of the zone, specific zone divided by the whole total PJM zone --- sorry, the total PJM footprint load. And that gets multiplied by total cost of the project. And you get that fraction that is usage based and fraction that is load ratio based.

Q. This is good. And the zones that are getting a greater share, the 50 percent share, those would include the APS zone?

A. No.

Q. No?

A. That would be Dominion will be getting close to 50 percent.

Q. Okay. What about PEPCO?

A. So I don't have --- so I'm good, but I'm not that good with exact numbers.

Q. Uh-huh (yes).

A. So I can say that Dominion takes and carries the lion's share, very close to 50 percent. They are under 50 slightly. If I may complete my answer. Next is going to be APS, and following that on a very equal basis,

maybe PEPCO, PECO and West --- pardon me. PJ --- yeah, I already mentioned APS. ComEd is also carrying a reasonable amount. Illinois, Ohio and Indiana are also carrying --- sorry. I'm mixing load with ---.

Q. When you say --- I'm sorry.

A. --- stated. Pardon --- pardon me. I got confused a little bit there. Can I correct my answer?

Q. You may not, no. Go ahead. Of course.

A. So --- so talking first, as a zone basis, Dominion will carry the lion's share, close to 50, but below that. I think the next will be PECO, PEPCO, PSEG, AEP, APS and ComEd. And everyone else will carry a small portion that is sub one or two percent.

Q. Now, now, I've been dying to ask another question.

A. Go ahead.

Q. All right. So when you're talking about these allocations on a percentage basis to each his own, you're talking about the entire cost associated with the $1.16 billion dollar project?

A. It is the entire cost of the project, yes.

ATTORNEY WILLIAMSON:

All right. Do you --- Mr. Callas, do you happen to have the response to WVEUG set three, number seven?

ATTORNEY CALLAS:

No.

ATTORNEY WILLIAMSON:

So we were going to admit that exhibit with Ms. Menhorn.

A. I -- I don't have that exhibit in front of me.

ATTORNEY WILLIAMSON:

Yeah.

CHAIR:

I think the Consumer Advocate's getting it.

ATTORNEY AUVILLE:

Set three?

ATTORNEY WILLIAMSON:

Set three, number seven.

ATTORNEY GRUNDMANN:

This is this; correct? This?

ATTORNEY WILLIAMSON:

Yep.

BY ATTORNEY WILLIAMSON:

Q. See, you could have punted it to Ms. Menhorn, but here we are.

A. I will try my very best to answer the question.

Q. I appreciate that. I'm just --- I'm just teasing you.

ATTORNEY CALLAS:

What is that? Was that Mr. Abdulsalam?

ATTORNEY GRUNDMANN:

It is not. It is by Ms. Menhorn.

ATTORNEY WILLIAMSON:

So, yeah. So just ---.

ATTORNEY GRUNDMANN:

May I approach?

CHAIR:

Yes.

ATTORNEY GRUNDMANN:

I was close anyway, but I like to ask it. All right. Here's the --- the request 3.7 and then if you scroll down --- and I'm told I do it backwards on my mouse, but you'll see these numbers here.

A. Okay.

ATTORNEY GRUNDMANN:

Thank you.

ATTORNEY WILLIAMSON:

So --- so we had --- and Chairman, Commissioners, we will present this as an exhibit. We were doing it --- going to do it with Ms. Menhorn because she was the sponsoring witness for this response, but we ended up here. Sometimes it goes that way.

BY ATTORNEY WILLIAMSON:

Q. So the question, Doctor, was that we wanted to see

an allocation for each zone based on the analysis that Ms. Menhorn had undertaken. And what she shows doesn't quite square with your recitation of percentages. And there may be a good rationale for that. But basically, since not everyone has access to the response, basically what it shows is of the $1.1167 billion, the Allegheny Power System zone, the APS zone would be allocated $300 --- roughly $324,000,000 and Dominion would be next in line at roughly $306,000,000. And then others, including AEP, BGE and PEPCO and ComEd, have relatively larger shares compared to everybody else. And --- and so what you articulated when you said nearly 50 percent for Dominion is what caused me to think of this response. Do you have any clarification based on reviewing this?

A. Yeah. So number one, as I said, I cannot keep all these numbers to the second digit by heart. I don't see a reference to where the witness here developed the numbers. It could be a mistake and it could be right as well. And I would like to also highlight that the cost allocation, Madam Chair, Commissioners, and Mr. Hanna, are not static for a project that's live. So as the project is proposed and gets approved by the PJM Board, the PJM transparently posts part of the white paper that gets published upon the PJM Board approving the project, a table detailing the cost allocation for each zone. And

you can track those numbers. Without a clear reference to where these numbers came from, I cannot attest to the accuracy, but I stand behind the numbers that I provide.
Q. You articulate --- sure. They're just different than these numbers; correct?
A. Yeah. And --- and again, I'm not saying that the numbers are wrong. They might be representative of the project scope at a specific time. They might include an error. They might require some clarification. So, subject to check, we can take an action item to reaffirm the cost allocations to put it on file.
Q. Sure. You mentioned that, you know, the allocations are not static, that --- that the --- you know, this is from a snapshot in time based on whatever FERC approved cost allocation methodology is in place; correct?
A. Correct and wrong. So the cost allocation methodology is static. What FERC has approved, how we will distribute cost is static. What will be dynamic is the --- the --- the --- the figure itself --- the figure itself associated with who gets what because the project scope itself can change. And hence when the project scope changes, the cost changes. The percentage could change depending on use. And then when you calculate the dollar amount, you may end up with a different value.
Q. Yeah, yeah. So --- so essentially what I would call

the allocation factors would --- could change?
A. Could shift.
Q. Yeah. And right now, there is a static approved FERC methodology, but that too could change at some point in the future?
A. That's a very major process.
Q. Sure.
A. It's true, it can --- it can change. But we have a well-established FERC cost allocation process that we base our cost allocation methodology on.
Q. Oh.
A. I'm sorry. I really cannot comment more on these numbers.

ATTORNEY WILLIAMSON:

No, no worries. So I wanted to turn to the --- it's fine. Okay. We may be able to produce that as a cross exhibit before the time is up.

BY ATTORNEY WILLIAMSON:
Q. If you could turn to your Direct Testimony at page 65 and your Map 7.
A. Yeah.
Q. And if I --- if I look at what we identified as WVEUG Cross Exhibit 2, that cross exhibit is really a --- a --- a more concentrated view of where these clusters come together; correct?

A. I didn't see that exhibit. I cannot speak to that.
Q. The exhibit that we gave to you?
A. Oh, now you mean?
Q. Yes.
A. Yeah, it's approximate, yeah.
Q. Yeah. It's sort of a more concentrated view of --- of the clusters that you show in Map 7?
A. Well ---.
Q. A more centralized view is probably a better ---.
A. So I think this is an important point that I would like an opportunity to clarify. So I do not want the --- the --- the Commission, nor to yourself, Mr. Hanna, the organization that you're representing or the stakeholders here attending think that we can draw a very accurate fine line specifying exactly what the boundaries are for the west cluster, what the boundaries are for the east cluster. These are demonstrative drawings to simplify the analysis and the message for the purpose of communicating the idea to stakeholders. It's not to be used to cross correlate with the two maps that you have showed me.
Q. Understood.
A. Yeah.
Q. And if we could then turn to Map 3, which is at page 47 of your testimony. Sorry.

A. Yeah.
Q. And I just want to work through this a little bit. The green dots in the middle of your map, it says data center load. Do you know if that's prospective data center load, existing data center load, or some combination of both?
A. At the time the study was conducted in late '22, 2023, it was at the time prospective.
Q. All --- all --- all of those green dots were prospective?
A. I did not complete, so.
Q. Sure.
A. The forecast that we have will have a component for load that is existing and load that is growing from --- from the date that we are at or from the date the forecast was developed. And Mr. Gledhill can --- can walk you through that process. But the circles here basically refer to where the data center concentration exists for --- as --- as the --- as the note says, this map is only intended to illustrate the general electrical connectivity of the projects. And the header of the map or the title says the severity and location of liability violations 2027-'28 study year. These are basically the locations that we are seeing large concentrations of data centers loads and the activations to help illustrate why

the flows that are shown with the arrows the way they are.

Q. And so these data center loads, as we sit here now, some of them may be in existence, some may still be ---

A. Yeah.

Q. --- prospective?

A. Yes.

Q. Okay.

And then if we look at the yellow lines, what we call the thermal overloads, would you --- would you refer to those as violations?

A. These are violations, yes, part of the violations.

Q. And if I'm looking at these correctly, I see toward Brighton and Peach Bottom, the yellow line that's in --- Peach Bottom's in Pennsylvania. And then that works its way down to --- to Brighton and Brandon Shores in Maryland; correct?

A. Correct.

Q. And then if we look to the --- the left corner quadrant, there's a yellow line of violation for Bath County to Valley; correct?

A. Correct.

Q. And then there are other violations in what is Northern Virginia; correct?

A. Correct.

Q. And then if we look at the --- the X's, non-convergence, I assume those are also violations; correct?

A. Excellent question. So --- so number one, the snapshot that's shown in the map here is a representation of the model and the state of the system as we anticipated it almost four years ago.

Q. Right.

A. That's one. Two, this is only showing the 500 kV backbone and above. And there are way more violations than what's highlighted here. Again, as I say, the purpose of this map was to demonstrate to stakeholders why the needs are critical and why are they materializing the way they are.

Now, back to the overloads and what the X's represent. The X's represent conditions that if outages on those lines materialize, the model demonstrates a voltage collapse condition. What is a voltage collapse condition? It's a condition way beyond a thermal overload. It basically means --- again, using analogies, it means it's a column in a building that if you knock it down, the entire building doesn't buckle. It doesn't squeak. It doesn't show cracks. It just crumbles on itself. So that does not --- please don't read into these highlights that these are the only violations that

are there. There are extensive amount of violations. Each one of these X's, each one of these outages in that model leads to the entire system collapsing, which necessitates the level and the type of upgrades that we have pulled through in 2022, '23 and beyond.

Q. Yeah, no. I appreciate the clarification and I'm only attempting to review what you opted to present in your testimony.

A. Thanks.

Q. So the X's, those are --- those non-convergence events reflected on the map are violations; correct?

A. Yeah.

Q. And they're based on your anticipated assumptions regarding load growth, generation, deactivation, changes in renewable energy structure, the drivers that you talked about?

A. Correct.

Q. And if we look at the non-convergence incidents that are reflected on this map, two of them are in Maryland; correct?

A. Not correct.

Q. No?

A. So a line could be 200 miles long and the X just donates ---.

Q. Is not geographically, like, perfect?

A. Like the outage can happen ---
Q. Yeah, understood.
A. --- at the end of a line that's in West Virginia or that's in Virginia. But I --- I --- I believe I communicated or conveyed my message.
Q. No, I understand now. You're simply highlighting that it would be somewhere on that line?
A. Yeah.
Q. It could have an impact outside of the state in which the X has been placed?
A. Exactly.
Q. Yep, I get it. Did you indicate --- I don't remember you saying this, but I've been told you did. Did you --- did you indicate that there's a white paper discussing cost allocation?
A. Yes, absolutely. It's a requirement that PJM releases a white paper summarizing the decisions that the board has made in response to PJM Staff recommendation to approve Project XYZ.
Q. And do you know if that's been produced as part of this proceeding?
A. I believe so. It would be difficult for me to think that it was not, but it's public information.

ATTORNEY WILLIAMSON:

I would ask that that be provided as a

post hearing exhibit, Your Honor, if it hasn't already been provided.

CHAIR:

Yes, it may.

(WVEUG's Post Hearing Exhibit -- was marked for identification.)

ATTORNEY WILLIAMSON:

All right. And so we should have that discovery response we were talking about and with which you had clarifications, that we can identify and move into the record provided that Counsel for --- for the Applicants is okay with that. We --- we did intend, as I mentioned, to --- to introduce it with Ms. Menhorn in any event.

ATTORNEY CALLAS:

Do you expect to --- to examine her on it as well, presumably since she ---?

ATTORNEY WILLIAMSON:

Yes.

ATTORNEY CALLAS:

Yes, that's fine.

CHAIR:

All right. So that ---.

ATTORNEY WILLIAMSON:

So I have no additional questions. But we

will --- the exhibit will get here and we will try not to be too disruptive in making sure it gets into the record. And then we have the Post-Hearing Exhibit request for the white paper on cost allocation.

(WVEUG's Cross Exhibit 3 was marked for identification.)

CHAIR:

Okay, thank you. Mr. McGhee.

ATTORNEY MCGHEE:

No questions.

CHAIR:

Mr. Stephens.

ATTORNEY STEPHENS:

Thank you, Madam Chairman.

CROSS EXAMINATION

BY ATTORNEY STEPHENS:

Q. Hello, Dr. Abdulsalam. I am Bradley Stephens. I represent the County Commissions and Ponderosa Pastures Corporation in this proceeding.

A. Hello, Mr. Stephens.

Q. I'd like to ask you a little bit about with the generator deliverability test and the RTEP process. You make reference at several points in your testimony, I'm not necessarily pinpointing one right now, but you make reference to a block dispatch methodology and some

changes in that. Could you explain how those have changed so --- hopefully so a lay person non-electrical engineer can understand?

A. With pleasure. So the --- the test that Mr. Stephens is --- is referring to is one of the reliability tests that are included and well understood by folks who conduct these types of reliability assessments inside PJM and outside. And basically what it looks at is what --- if the operating point of --- meaning the amount of power being output from a specific generator or a group of generators drift from the initial modeling state inside a specific static model impact and overload. So when --- because we try to utilize automation and efficiency as much as we could and because the system PJM is so vast and large and it has to maintain a very high level of reliability, we --- we stand --- we --- we develop in any planning assessment a finite set of static snapshots of system operations. That snapshot represents a static level of load that is reflective of the forecasted peak and a corresponding dispatch inside the case. Like generated X would be producing 100 megahertz, generator Y will be producing 200 megahertz, and so on.

That static picture does not necessarily represent all possible credible operating points that each generator can decide to operate at reasonably. So what

the generation deliverability method utilizes is it ramps up and down the generation within its economic merits to ensure that if the generator owner decides to throughput this generation in merit on the grid and sell it to meet reliability, it will not be faced with a bottleneck from the transmission side. Now, where does the block dispatch come into the picture is that if we are ramping upload and you need to allocate the generation inside that model, you cannot just assume that the entirety of the generation --- let's say that PJM --- and this is just hypothetic. PJM has 1,000 generators. You cannot assume while providing due diligence assessment of reliability that the 1,000 generators will be available all the time to serve PJM and you will dispatch all of them inside the case.

So what the block dispatch does is that it takes a reasonably accurate three step economic block for each generator, like at a specific price or at a specific load level, this generator will throughput at this first economic step, 20 percent of its output. And then if the price --- if the load level goes a little bit higher, driving the price higher, then another 40 percent and so on. It takes that into account as in establishing that starting point of analysis instead of dispatching all of the generators and assuming there is --- there are no

outages, have that before forced or --- or scheduled. And also to respect the economic conditions of the case itself, like, you cannot have all of --- it's impossible to have all of these generators dispatched under a very light condition and they will be losing money running where the megahertz is not required. I hope that I --- I explained it to the best I could.

Q. Oh, sure. That was very clear. I appreciate it. Specifically with the generator deliverability test, there are some differences in how you can model generators depending on their fuel source though, right?

A. Yeah.

Q. So natural gas units can ---

A. Yeah.

Q. --- be dispatched. Generally they're going to be dispatched in merit order, ---

A. Exactly.

Q. --- the cheapest first, ---

A. Yep.

Q. --- notwithstanding a transmission constraint.

A. Correct.

Q. Right?

A. Yes.

Q. What about variable energy resources like wind units, like onshore wind.

A. Yeah.
Q. How do you --- how do you model those in the generator deliverability test?
A. So one of the good benefits of this unique and very well-respected way of accounting for the variability and generation outages --- sorry, dispatchability, that the generation deliverability module that PJM uses that now some other RPO's and ISO's started to use similar establishments for, it takes the ramping rate for these resources into account so that you do not assume that at a specific operating point, you are relying on a generator that may not be available to provide you the reliability value.

So what does reliability value mean? It means what is that resource class capable given its geographic location and its resource type to provide to the PJM interconnection acknowledging our weather patterns and geography coincident with the peak operating load conditions. So for example, for offshore wind, it could be 50 to 60 percent. We would will not rely on offshore wind viewing to serve peak load for more than that. For --- for example, solar during night time or during early times in the year in the day, we cannot assume that solar is going to be available to provide 100 percent load during the peak hour in winter where most of us are

turning our stoves for dinner and there's no --- the sun is not --- is not present, etcetera.

So, and --- and all of these details, and I'm trying to simplify here, are listed in --- in --- in great transparency part of Manual 14B, which is basically the planning manual that lists what PJM does and it's planning assessments according to the rules that have been agreed to with our stakeholders.

Q. Okay. What about specifically onshore wind? How does PJM --- how have they modeled in the RTEP process? And if it's changed, how has it changed over the ---

A. Yeah.

Q. --- last few years? What percentage are they considered to be available?

A. So --- so I don't think from a --- from a percentage perspective onshore wind --- and I have seen some windfall driving here, not many though. We do not have a very high penetration level that will make us rely in the same manner on onshore wind as offshore wind or a solar because the correlation for solar with the summer peak is very transparent. It's very clear. But the correlation of the summer peak load with high wind speeds might not be that --- that --- that imminent or --- or --- or --- or reliable. So we use --- as I say, we use different ramping levels and different capacity factors for each

resource type. And those specific numbers are listed inside the manual itself.
Q. Would you happen to know offhand what the percentage for onshore wind during summer peak is?
A. I do not. I cannot provide an exact number, but it is relatively small. It's not high.
Q. Would 31 percent sound about right?
A. It might be around that, maybe less than that.
Q. Okay. Would you agree with me that there may be times on the hottest days of the summer that perhaps none of the onshore wind units in, say, Western PJM are operating?
A. That's likely and we account for that as well, part of another test. So PJM does not only run general reliability tests. PJM also runs N minus 1 tests similar to the conditions that lead to collapse here. So these outages do not account for ramping generation. The generation gets statically represented with its initial dispatch level. We also conduct, in order to cover conditions like the ones you represented or you alluded to, conditions where we test something called the reliability to deliver the load. And that looks way more carefully at how much outages or how many outages and facilities can materialize in a specific load area. We call it an MDA. How many simultaneous plants could be

not available, taking into account the resource type and the historic performance of these assets, and then we run what we call a low deliverability test. That load deliverability test addresses other issues, one of which is the condition that you just mentioned.

Q. Okay. Is it --- it's not your testimony then that every generator that can be dispatched and merit order every day and every hour of the year be permitted to be dispatched and deliver energy into the grid to an end point, a point of sale, is it? That's not your testimony, is it?

A. So my testimony does not delve into the reasonableness or not of what is established in our planning manuals agreed by --- and what analysis should be done. But I can provide my professional opinion on the prudency of the procedures that they will cover reasonably well the conditions that we anticipate to see over real --- real time without being overly pessimistic and imposing additional builds or capacity requirements on the rate payers.

Now, this is not a static decision. That decision shifts with time. If we monitor --- if our monitoring in our market performance and real time operations proves that we have been overly optimistic in relation to our assumed ramping limits of onshore or on land or wind, we

will look into that and adjust. And we do that every day like --- and again, Andrew can speak to specifically --- he has a subgroup within his business practice that looks and monitors this type of performance and adjust those values on an ongoing basis.

Q. Okay, thank you. And forgive me. I've considered switching the transition lenses.

A. Well ---.

Q. I'm afraid I'm going to trip over my own feet.

A. No worries.

Q. So I got to be able to see closer up here. Thanks for ---

A. Yeah.

Q. --- bearing with that oddity. I want to shift over to conductors and --- and what PJM is --- is doing with respect to maybe a SAG study or two. There's been reference in some of the testimony to PJM. I believe it was PJM that directed AEP a study to conduct a LiDAR SAG study where they get a super precise ---

A. Yeah.

Q. --- picture of the ground clearances ---

A. Yeah.

Q. --- from the conductors to see if they can increase the line reading.

A. Correct.

Q. Is that correct?
A. Yeah.
Q. But PJM directed AEP to do that because of the MARL proposal, right?
A. Correct.
Q. And --- and do you know the status of that right now?
A. To the best of our knowledge, AEP did receive the DEA. But to the best of our knowledge, we did not get an update that they initiated the work. This type of LiDAR activity is straightforward to conduct and it will provide insights on whether the ground clearance is enough sufficient or not. The outcome of that could be restoring the system on the existing towers, clear the right of way under the conductors or in extreme conditions, rebuild the section. That section that we're talking about is 15 miles long.
Q. So relatively short?
A. It's relatively short and the mitigation is going to be in situ, meaning that any action that will need to happen on the line will be in space. It is very, very --- it is unlikely that there will be a requirement to impose additional right of way impasse.
Q. So you're --- you're saying it's quite plausible that AEP could simply reconductor the Kammer-502 line?

A. It is --- it is one of the options. They could --- as I say, that could be sufficient clearance. There could be clearance issues associated with right of way clearing. Maybe they can clear some --- some --- some land underneath a couple of sections and report a day. Maybe only five spans out of the 100 spans or so for a 15 mile long line that requires mitigation, or in the worst condition, they can use an advanced conductor or they can rebuild the line. But, again, the rebuilding here is an in situ pure brownfield type of exercise, my assessment, but the transmission owner may come back recommending something else.

Q. Sure. So what --- what percentage increase could could --- could AEP realize by reconductor in that line over --- over the current MVA rating or ---?

A. So, a great question and thank you for giving us opportunity to cover this part of the ATT's and advancing technologies. It is --- it is sometimes or most of the time misunderstood what an advanced conductor can offer versus a classical conventional conductor. Special conductors are currently being used right, left and center in PJM and has been --- they have been used forever. A key with these special conductors is that they require special handling and they do not come at the same capital price or installation price as the

conventional conductors, and they may for --- for a higher weighting, they may impose a higher stress compared to the existing conventional conductor. So let's say that your existing conventional conductor can carry 1,000 amps. If you want a conductor to go to 2000 amps, it's not necessary to be lighter. So it might be lighter for 1,000 amp, but once you go to 2,000 you will have a higher loading.

Now, when you also take into account the vintage of the towers and the physical condition, it might not be prudent in cases to string a very expensive conductor on a structure that will have to be rebuilt in five years. And once you trigger the rebuild, it might be overly more economical to go to a conventional path than to reconductor using an advanced conductor. So in short, advanced conductors could add great value for short spans new conditions construction, or for short spans old construction that is in good condition. But if you would have to rebuild the line in a reasonable percentage of cases, you may need to also better off just switch to a conventional conductor.

Q. Thank you. And stepping aside from reconductoring or rebuilds, though, could I possibly possible outcome of that LiDAR SAG study be that the line rating can be increased ---

A. Yes.
Q. --- as is ---
A. Yeah.
Q. --- because ground clearances are more ---
A. Is there, yeah.
Q. --- than what the prior information ---
A. correct.
Q. --- indicated?
A. Yeah.
Q. So what percentage increase could that provide a transfer capability?
A. I --- I cannot ---- without having all the technical details in front of me --- and I'm not a transmission line designer. I cannot respond to that. But for them to accept the LiDAR, I would assume that there is a likely chance, let's see what we can do. Maybe --- maybe the scope is not for the entire 15 mile long stretch. Maybe just a couple of miles, maybe it's a couple of structures, and so on. But I cannot give you an exact number.
Q. Is it fair to say though that --- that an increase in transfer capability could be substantial, say, 25 percent without any new work?
A. Again, that's --- that's very optimistic, so --- but let me --- let me clarify something. What --- so using

the exact same conductor and clearing it through a LiDAR study is similar for example to us saying oh, we are going to use dynamic --- for economic needs. That type of gain is usually around the ten percent. It's not going to double the rating of the --- of the line, or extend its life, or make it as equal or as capable as something that we're building today that has been built 40 or 50 or 60 years ago. So, --- so let's take --- please, let's take all of these factors into --- into account.

Q. Certainly. Have --- has PJM directed or suggested that any of the other transmission owners like FirstEnergy conduct any LiDAR SAG studies on any of their lines recently?

A. Our expectation is that our transmission owners, due to the competitive nature of the process, are very well driven to make sure that they offer the more efficient cost effective fixes given the competitive nature of the process. The project that we are talking about now is one example. They do not know what NextEra is going to be submitting and at what cost, what LS power, what other running comments will be submitting. So they will be put on the edge trying to offer their best in order to win the job. We as a transmission operator and a planner because our scope does not involve field type work ---

and this type of responsibility is entrusted to the transmission owners by the federal regulation. They are responsible for running the facilities to within the boundaries of safety and good utility practice. We should not be second guessing what they are proposing to do by bringing forward what will be more efficient than cost effect. Now --- now, the definition of that would be --- could be a bit wide. But, again, I cannot dictate a specific technology on a transmission owner. I, as PJM. I cannot specifically go and dictate a specific conductor on a transmission owner because there are safety and --- and --- and --- and public wellbeing considerations associated with that, right, either to the personnel operating the equipment and the facilities, or for folks who are, like, running the crops underneath it, or --- or harvesting hay, or for --- or doing some recreational activity under it, like, underneath it running and so forth. The deal has to own decisions or a project proponent has to own decisions related to design and technology implementation. What we can do is that we can encourage that and we are actually doing that part of our 1920 compliance proposal.

Q. I appreciate all of that, but is your answer that PJM hasn't suggested that, say, FirstEnergy do any LiDAR SAG studies? Do I understand your response to be no?

A. No.
Q. Okay, all right. Appreciate it. You mentioned the PATH project being with --- I don't know if I'm using the right terminology, but it was withdrawn from the RTEP process after successive modeling indicated that the need was no longer there?
A. That was a pure PJM decision because as you may recall, PJM had a very strong need for that as PATH project to connect again the west to the east, ease the congestion along the path, and meet reliability needs for load growth. The economic downturn that happened nationally required or made it prudent for PJM to relook and reassess the need and upon that reassessment, PJM decided to shut the project.
Q. Okay. And following that though, in the following years, did PJM take that opportunity of presumably lesser congestion, lighter peak loading on the backbone transmission system 500 kV 765 to suggest that perhaps any reconductoring of existing lines be done?
A. So the benefit --- so PJM is required, part of our governing --- and operating agreement to run a market efficiency cycle in parallel part of RTEP site. And if that process indicates that the benefits to loss ratio, and Mr. Hanna, I believe if I'm remembering correctly his last name, was questioning me, that is a few of the

benefits to cost ratio assessment plays a major role in. If it would have shown that there is a need during the time from the cancellation of PATH to before MARL that there's an opportunity to upgrade that path and there would be significant benefit exceeding 1.25, which is basically 125 percent of the cost, PJM would have moved forward and proposed to operate. Although having said that, that process has been working in the background and some smaller upgrades have been proposed and addressed by PJM through the ---.

Q. Okay. The procedures you're describing just then though, are those --- if I go to PJM manual, is it, 14 ---

A. B.

Q. B?

A. Yeah.

Q. Regional transmission planning, basically the RTEP ---

A. Yeah.

Q. --- rules, is it in there? Can you find it in there?

A. It --- it --- it is --- it is in there and some sections of --- related to the competitive process are covered part of other manuals such as 14F and --- which also covers some aspects of the cost allocation

associated with RTEP reliability based project cost allocation and market efficiency cost allocation.
Q. Okay. I think a couple of times you --- you've made a distinction. I'm sorry. What --- what's the first category? You referred to market efficiency.
A. Yes.
Q. What's your first category again? I'm sorry.
A. Reliability based project. Pure reliability based projects. These are projects that target addressing violations that stem from strictly applying the planning criteria. This means that you will have to take action by either shedding generation or shedding load in order to maintain reliable operation. We have --- it's a requirement. We have to address those as a reliability need. Market efficiency deals more with the operating operation of the system could be more economically favorable if you alleviate the congestion on this path, so that more cost efficient generation can reach the load instead of more expensive generation.
Q. By that reasoning, wouldn't PJM be able to identify market efficiency projects that may eventually evolve into --- morph into reliability projects when it gets more congested?
A. That would be a failure at PJM for market efficiency to capture a market efficiency need that's so high

because usually through practice, the reliability needs transpire ahead of market efficiency needs. So for a market efficiency or a cost to benefit ratio to be --- pardon me. For a benefit to cost ratio to be so high, normally it gets captured, that type of need gets captured as a liability need. Ahead of it, it's captured market --- as a market efficiency. So --- and if you are familiar with our processes and updates that we provide, every time PJM goes through a reasonably big or large RTEP process, the market efficiency analysis that follows shows that the reliability fixes offers a significant amount of market efficiency gain to the order of $1,000,000,000 a year to all of the LDAs within PJM. And I'm just --- this is one of the normal figures that --- and this is public information, part of the market efficiency updates that PJM provides.

Q. So aren't all of the RTEP --- the projects coming out of the RTEP process essentially market efficiency projects ---

A. No.

Q. --- when you get down to it?

A. They are --- they are referenced as reliability because it's called reliability transmission expansion plan. Under that wing, under the umbrella of reliability, we have reliability only projects. We have

market efficiency projects. We have public policy projects and we have dual intent projects, projects that can address both.

Q. Okay. Speaking of the public policy projects, I think that you made reference at one point to the PJM Operating Agreement, Schedule 6, Section 1. There's a Section that --- that addresses a state agreement approach.

A. Yeah.

Q. Those would be --- that would --- that be an example of a public policy project, one coming out of a state agreement approach to devising a transmission line?

A. So --- so an --- an example of state agreement approach is what PJM initiated with New Jersey, the state of New Jersey to enable its policy of integrating 7,500 megawatts of offshore wind. That was --- have successfully been opened and awarded, but due to the shifting landscape associated with federal and state policy together with costs, shifts on blockchain, cost increases, New Jersey abandoned it. But --- but that would be one --- one of the examples.

Q. But that's --- that's done purely in coordination and cooperation with a state and maybe its respective regulatory body, like its Public Service Commission ---

A. Correct, sir.

Q. --- Public Utilities Commission?
A. It has to be initiated by the state, not from PJM. PJM enables the state to execute and run a successful public policy project.
Q. Okay, appreciate that. I'm going to refer to --- I don't have it in front of me, but I know in the --- in the WATI second set of data requests, they --- they basically ask the broader question, did --- did PJM study or model a scenario in which MARL is constructed and placed into operation that FirstEnergy's linked 500 kV segment is not, and I believe your response was no. Is that ---?
A. No, we did not study that scenario.
Q. Any particular reason?
A. Because we honestly do not see a way given where we are today that MARL --- we really hope that MARL will continue to be permitted and energized. The system needs MARL and the other two 765 lines that we have proposed to connect west and east in PJM dearly. And further delays to transmission enhancements on the corridor will have major impacts. And as Ryan --- as Mr. Colley mentioned earlier --- and let me take that opportunity to illustrate, PJM today is starting to face major transfer issues between western PJM and eastern PJM. Although, we are shackling or we are retaining significant amount of

generation through RMR's, we are using every toolbox in our operational toolbox. We are starting today --- we are --- we were anticipating that the constraints will happen in 2027. We are starting to see them not this year. We started to see them in winter of last year during the time, early times in the morning where solar penetration is very low and the thermals require ramp up time from the light load condition during midnight and late --- late night hours because the load is not relaxed as it used to be during the night time with all the load that's getting increased and with the retirement of generation. So that path is getting stressed today, not in two years or three years or four years or five years. So we really need the line.

And on top of the line or before the line, the VAR reinforcements that we have planned along its corridor have that be Black Oak, have that be Woodside because the whole voltage collapse conditions materialize before we hit thermal limitations. So we are really looking --- and there has been questions asked why is PJM accepting the 2031? We did not accept the 2031, but we have to respect what we are hearing from the transmission owners and --- and --- and proposing entities that regulatory proceedings take time, which it should, and construction will take its time. And what they are comfortable

committing to with a promise to advance it to close to 2029 or so.

We are hoping that in addition to waiting for the lines, which will take long time --- longer time to construct, that we will be able to advance some of the VARs in Woodside, some of the VARs that we are planning in Black Oak to soften some of the voltage stability impacts along the corridors.

Q. So when you're saying the VARs, volt-amperes reactive ---

A. Yes.

Q. --- like static ---

A. Yes.

Q. --- VAR compensators or ---?

A. Yeah, STATCOMs, forms, cap banks and SVCs.

Q. Okay. I'll come back to --- you mentioned increase in load growth. I'll come right back to that. I wanted to ask you though the question I most recently asked you. Is the inverse also true that PJM did not study the FirstEnergy project, the 500 kV on its own, without MARL?

A. You are referring, Mr. Stephenson (sic) to the 500 kV that was proposed by FirstEnergy in the window that we picked ---

Q. Yeah.

A. --- MARL through?

Q. Yes.
A. Okay, great. So another great question and there has been lots of confusion about the issue and why did PJM selectively pick MARL out of the group of projects that were proposed inside the west cluster. If you look at what was proposed, and --- and the maps are available publicly, what was proposed by FirstEnergy, what was proposed by other non --- non-incumbents, what was proposed by NextEra as a final solution for the problem, you will see very close similarities. What put MARL --- what gave MARL the edge is that they did not stop within the Gore/Dobbs area. They brought the 500 kV line all the way inside Virginia by adding an additional 500 kV transfer path inside Virginia as well. So that put them at a significant edge above FirstEnergy.

Why I'm bringing this comparative is because people were skeptical that oh, there could be other solutions. The incumbent itself proposed a 500 kV line that runs from the Kammer-502 Junction location to the Dobbs/Goose Creek/Aspen, but they came short. And that was one of the technical advantages that MARL had for us to pick them. But if I --- if PJM asked MARL or masked NextEra's name and masked FirstEnergy, the two projects will look very similar with the exception of the MARL is proposing to continue as it approaches Virginia directly into the

central area.
Q. Okay. Back to the load growth issue. You were referring to that in your last answer, rapid load growth or at least in the modeling. You're seeing the demand curve go up sooner in the day. Is that fair to assume?
A. Uh-huh (yes).
Q. I think is one part of it not necessarily the load growth, but the congestion and --- for example, the separation as he put it, in locational marginal prices in PJM discrepancy if you will, say, in the PEPCO and BG &E zones ---
A. Yes.
Q. --- and APS and AEP and elsewhere? Do you --- do you concur with Mr. Colley's testimony that it's essentially severe shortage of generation in those PEPCO and BG&E zones that's causing all of this?
A. I would say 50/50 and let me explain why and I'm not trying to be difficult. So BGE, PEPCO, Dominion, APS, if we are talking about load serving entities here, or LDAs, they are --- they all decided to be part of the integrated PJM transmission network because we all benefit from a macro market rather than a micro one. Like it's very easy for us to go and say, oh, each state will be with its own and we can just assume that there is a hypothetical or an imaginary line around each state and

each state will just come up with its own generation, end of story, to cover its load. There are efficiencies associated with power markets and that's why they were introduced.

So in order to answer your question, it's true that part of PJM, BGE or State of Maryland, for example, not picking on anyone --- we can make the same claim to a different extent to Virginia, that they have a misbalance between --- an imbalance between generation and load, correct. But that's the whole point of having the market and having an integrated system like PJM that you do not have to necessarily have generation inside your area. You can put other generation that is available to provide and offer you more efficient power from outside through enabling transmission.

Q. Okay. But --- but nothing is stopping, say, the regulatory authority in Maryland from approving more generation, right?

A. We would be very happy with that if we approve more generation everywhere, not only in Maryland.

Q. Yeah. So, I mean, it could be market forces ---

A. Yeah.

Q. --- or whatever, but it's physically possible to build the generation closer to where it's needed the load in those areas, right?

A. I'm a planner. I can build the generator anywhere. But will I get the permits on time? Will it cost me the same money? Do I have access to gas pipeline capability or coal or resource? All of those factors need to be taken into --- into account.

Q. Okay. Shifting over to data centers because as I understand it, that's a lot of the anticipated load growth, isn't it fair to say, is attributable to anticipated expansion in the data center footprint, i.e., more data centers constructed in Northern Virginia, maybe to a lesser extent in Maryland. Is that right?

A. So the 2022 and '23, when --- when it was the time for us to open that window, it was driven by the number of factors that I talked about, the three or four factors. One of them, a strong factor was load increase. And as it relates to that pocket within the --- the system is Virginia's load increase or Dominion's load increase for data centers, and Maryland's load increase in APS that is just north of Virginia. And also the retirements that happened elsewhere, including retirements in --- in --- in --- in BGE. It's factual.

Now, the problem with retirements --- we keep hanging our hat on --- on the load alone. The load can come in 300 megawatts --- well, like chunks on an annual basis, or 1,000 megawatt load or --- or 1,500. One ---

retirement of one plant, one large or sizeable coal plant is about 1,000 megawatts and that happens overnight. The retirements that we see in --- in --- in Maryland are close to 2,000 megawatts. So that in itself will have a similar impact to bringing in load because it will need a net import, in addition to the load growth for us to be able to --- to --- to maintain reliability.

Q. Understood. Hasn't there been substantial activity lately in a FERC proceeding concerning specifically computational loads? And correct me if I'm wrong. Do I understand that term in that context to refer to data centers that are not providing what I would call conventional enterprise IT, say, like, recordkeeping for a hospital, but instead they're training generative AI on large language models. They're doing cryptocurrency mining, things like that, that require substantial computing capacity? Like basically GPUs that NVIDIA makes? That's why no one can get decent RAM, I guess, in graphics part of a computer anymore, but maybe an issue for another day. But didn't FERC issue an order just recently concerning PJM's proposal with respect to how to handle computational loads?

A. Multiple orders have been issued by FERC, yes. One of them is an order to requires us to add the capacity shortage. And PJM did file a --- a response to that with

a reliability backstop in compliance with our requirements and government documents that require us that if we fall short three times in a row procuring our capacity, we have to run a longer term dedicated capacity auction to procure new capacity. And that's still being worked on between us and FERC to approve a proposal that's workable for also stakeholders.

Q. Okay. That --- that may be a different proceeding. There's probably multiple ones going on.

A. Multiple and it's a conflict. It's a conflict.

Q. Sure, sure. But in --- in one particular FERC docket, wasn't it the case that PJM proposed that those computational loads that PJM itself be permitted to shed them in times of peak load and reaching the contingencies under NERC criteria? Didn't PJM propose that to FERC?

A. We proposed at a minimum on a temporary basis for large local competition load that does not come in for interconnect with bringing their own new capacity, the right to PJM to shed them if conditions permit or require. And FERC did not accept the proposal.

Q. What did FERC suggest that should be done about that problem?

A. I --- I --- I think we are delving too far from --- from the proceeding that I'm comfortable responding to. But all what I can say is that the details of what comes

next is still going --- being worked on.
Q. Well, I'm just --- I'm going down this line because you mentioned and several other witnesses have mentioned data center load growth. So I feel like it's pretty central to what we're talking about. Didn't FERC suggest that the state should take a more active role in that process, in this case meaning Virginia, and that it might intrude on their jurisdiction if PJM was responsible for or had the authority to shed those loads and peak times?
A. Without specifically mentioning state names, any state will be --- like, this will be applicable to any state that brings a significant amount of load, or hosts a significant amount of load, or retires a significant amount of generation. I would say from a planning perspective, the impacts are very, very similar. I'm just saying that this topic has many angles and I'm afraid that if we --- if we continue to cover it with a narrow angle of, in my opinion, of this hearing, we might be misrepresenting the intent of the orders from FERC. And I'm not the only planner or the only responsible member of PJM involved with the project and I'm not feeling comfortable delving into the details about it.
Q. Oh, for sure. I don't want to misrepresent the FERC orders and I wouldn't call on you to do the same. I guess what I'm getting at is PJM proposed a solution that

involved basically disconnecting them so they're not drawing load from the grid. And FERC rejected that and said it's up to states to take care of that business because that could in --- that could basically infringe on retail rate making. It could impact that. It could impact or could infringe on the jurisdiction they have to do the same thing, right? I mean, isn't that your understanding?

A. I respect that that is your characterization of the intent of the FERC order, but I would prefer not to comment on it.

Q. Okay. What --- shifting gears, what software has PJM utilized to conduct the load flow modeling in the RTEP process and has that changed since the 2022 RTEP?

A. Yeah. PJM relies on world class sets of software packages. One of them is PSSE, the other one is TARA and many --- many others. And as you know, different versions get released all the time. And after testing and --- and our staff and principal engineers decide that it's safe to move from one version to another, we make the switch and we --- we do that all the time.

Q. How does one become qualified to use that software and conduct the modeling?

A. We have world class experience within PJM that not only develop world class planning criteria that's getting

adopted by everyone else following suit, but it's our criteria that drove the industry to develop a tool like that. So we have significant experience in house. I manage a staff that almost 50 percent of it are Ph.D. holders and a good chunk of those have spent their careers serving people of PJM. So any new intern engineer, have that be a fresh graduate or someone who's joining us from another entity, goes through a shadowing exercise, a training on the job type of exercise by area needs and principal engineers to get them up to speed to an acceptable level to use and adopt and implement our planning criteria. As --- as is the case, I would expect that it's the case in any other establishments of similar responsibility because I have been outside PJM, too.

Q. So it's fair to say even with that shadowing experience, somebody coming in needs electrical engineering degrees, probably power systems engineering experience under his or her belt. Is that safe to assume?

A. That --- that's safe to say, yes.

Q. Okay. How much do the licenses cost to use that software? Is it --- do you --- do you rent them effectively or do you buy them?

A. We --- we do not buy --- first off, I'm having difficulty connecting the question to the proceeding, but

we can adopt either one depending on the most efficient for PJM. So early on, these software vendors used to offer these licenses for a fixed cost covering a fixed number of upgrades or updates, and then basically, you have the --- the --- the right to use the software with the bundle forever, but without updates. And now, the industry in totality, they are moving more to a subscription based environment where you basically subscribe to a service of having that maintained, similar to what folks are familiar with like Microsoft 365 and other services.

Q. Okay. I --- I --- I don't mean to wander off the script, but, you know, we're talking about a RTEP --- an RTP process that relies on load flow modeling. I'm just trying to understand what goes on behind the doors of PJM. I --- I don't think I got an answer though as to how much it costs to ---.

A. I cannot provide a number. I'm sorry. I cannot provide a number.

Q. You don't know that information?

A. I don't have the number. I don't have the number and it changes year over year. Some --- some software is expensive by nature, but PJM gets even advantage pricing because of the size of the licenses that we acquire. So I'm not sure if --- and this is commercial sensitive

information, too. I'm not sure if me sharing it with yourself, it will be helpful.

Q. Might not be helpful, but it might help everyone understand. Can you --- can you give me a ballpark estimate? Are we talking ---

ATTORNEY CALLAS:

Your Honor, I'm going to object.

BY ATTORNEY STEPHENS:

Q. --- $10,000 or $100,000?

ATTORNEY CALLAS:

This question has been asked and answered.

CHAIR:

Wait a minute. One --- one speak at a time.

ATTORNEY CALLAS:

I'm going to object as ---.

CHAIR:

Okay. Let him ask his question.

ATTORNEY CALLAS:

Okay.

BY ATTORNEY STEPHENS:

Q. I'm just trying to get a rough estimate. I'm not asking you for the --- for the exact amount I would need to hand over to get it. Are we talking $10,000, $25,000, $50,000, $100,000 for a year or more?

A. I would say that ---.

ATTORNEY CALLAS:

Now --- now, I will make my objection. I have a couple. I --- I --- number one, I think the witness has said this is confidential information. Number two, it's been asked and answered a couple times or at least thought to be. Number three, while I appreciate Mr. Stephen's obvious curiosity in the underpinnings of PJM, I don't see any relevance to the testimony the witness has offering in either his Direct or Rebuttal to questions about what your software costs.

ATTORNEY STEPHENS:

Your Honors, I would just respond to that by saying the cost of the software is relevant to its accessibility to third parties if one was to want to replicate the load flow modeling that was conducted at PJM. So to that extent, I believe it's relevant and it's a fair question to ask.

A. To provide context, I'm not going to release the --- the --- the costs, but there are options for anyone who would like to validate the results through hiring a consulting firm. You don't have to but the --- the license forever in order for you to spot check a couple of results. And --- and we also tend to forget the open and competitive nature of the process. Not small average

PJM land owner, but we are talking about multi-billion dollar organizations competing on billions of dollars of transmission. People are not going to be quiet if PJM made a poor assessment of selecting a project over a project in the wrong way. You would be hearing about that. So the transparency of the process itself, now understanding where you're coming from, is self-healing to some extent as I understand it because of the competitive nature of the process itself.

BY ATTORNEY STEPHENS:

Q. Fair enough. I think I just have maybe one or two more questions and they pertain to --- I just want to clarify what Mr. Williamson was asking you about earlier. I --- I may have missed it because there was a lot of information there. He asked essentially how are the costs of MARL going to be allocated? And you split it in two halves.

A. Yeah.

Q. Can you --- I'm sorry to make you retread old ground, but can you run that by me again? What are the 50 percent this and 50 percent that?

A. Absolutely, yeah.

Q. Thank you.

A. So --- so we call these major regional bulk transmission projects and these are the projects that are

double circuit 345 and above. They get regionally allocate --- follow a regional cost allocation mechanism. So if you have a project costing $1,000,000,000 or 1,000 million dollars, 50/50 split means $500,000,000 bucket and another $500,000,0000 bucket. The --- the first 50 percent is split based on usage. So if area X uses it 80 percent, it will carry 80 percent of that 50 percent bucket and so on until we fulfill the entire 100 percent usage. The other 50 percent lump sum is distributed on a load shared ratio basis, meaning that if area Y has a load of 5 percent of the overall load of PJM, it will carry 5 percent of that 50 percent bucket and so on until we fulfill and --- and recover or cost allocate the entirety of the project.

Q. So in that latter scheme, it's collected from all the LSEs ---

A. Correct.

Q. --- and the entire PJM footprint, right?

A. And --- and the rationale for that is because the bulk regional --- of course, this cost allocation mechanism has been well established for a long time and approved by FERC and it is done that way because there is value that the regional bulk transmission system offers to the entirety of the footprint regardless of usage.

Q. Okay. So back to the first portion of that. I

believe it was your testimony that Dominion is responsible for the lion's share of ---

A. Oh, yeah.

Q. --- that 50 percent.

A. Yeah.

Q. Did --- I may have missed what fraction was that, 90 percent?

A. It is just shy of 50 percent. Of course, this is subject to --- to check, but I --- we will --- we will provide the numbers. It's just shy of 50 percent followed by APS. And then there are five or six LDAs that hover around the eight percent, seven percent, ten percent, and then everyone else has a sub two percent or three percent cost allocation.

Q. So what --- what's your best estimate of what the APS allocation is as?

A. As I said, it's lower than the 45 percent or 48 percent of Dominion. I --- unless I'm --- unless I made a mistake, they are definitely, in my opinion, not --- not higher than Dominion.

Q. So seven or eight percent ---

A. No.

Q --- from the other ones? Okay.

A. No, no, no, no.

Q. Okay.

A. It would be around maybe 20.
Q. Okay.
A. I don't have the numbers in front of me, but ---
Q. That's fine.
A. --- relatively it will go this way.

ATTORNEY STEPHENS:

Okay. Well, thank you, Dr. Abdulsalam. I believe that's all I have.

CHAIR:

Mr. Auville.

ATTORNEY AUVILLE:

Thank you, Your Honor.

CROSS EXAMINATION

BY ATTORNEY AUVILLE:

Q. Good afternoon. I'm John Auville on behalf of the Consumer Advocate Division. How are you?
A. Good afternoon, Mr. Auville.
Q. I want to pick up a little bit on some questions that Mr. Stephens was asking, so I can understand the relationship between all the pieces of what has been called the western cluster solution. So it might be easy if you turn to page seven of your Direct Testimony. I think this is the best place to sort of go through those pieces. So can --- can you walk us through or walk the Commission through the --- the discrete pieces of the

overall western cluster solutions?
A. My pleasure. So you would like me to read it or ---?
Q. So --- so --- well, you can just give it a highlight. So I mean, the --- what we're here today is the MARL line, but that's not the only part of the wester cluster solution; is that correct?
A. Yeah, yeah, fair enough, yeah.
Q. Okay. So --- and maybe it might be easier if we turn the page over to the next page because there's ---
A. Yeah.
Q. --- a nice little map that's in color ---
A. Yeah.
Q. --- that can show everybody the --- the discrete pieces of this; correct?
A. Yeah. So the project scope basically describes, as we're talking about, MARL --- a transmission line stretching from 502 Junction to passing by Black Oak, and then establishing the Woodside substation, which is adjacent to Stonewall or very close to Stonewall, before heading further south, terminating at Aspen or Goose Creek. They are very adjacent substations. I think we landed finally at Goose Creek. And all of that is 500 kV development.
As it relates to Woodside, Woodside is proposed to

be a new greenfield 500/138 substation that would include as STATCOM and VAR support. And we talked with Mr. Stephenson at length about that. And then at a later stage, Black Oak was actually proposed by the incumbent in the area to --- to --- to --- to utilize the benefits of MARL to enhance the overall reliability by tying the 500 and 138 kV systems at Black Oak.

Q. So let's back up just a minute because I may have a misunderstanding of how all these separate pieces work. So the MARL line is just the light pink that goes from the yellow dot that's close to Fort Martin or 502 Junction to just short of where the Woodside substation is; is that correct?

A. As it's defined now.

Q. Yes.

A. As it's defined now.

Q. Right. And so what this Commission and what's before the Pennsylvania and Maryland and Virginia Commissions is the pink portion of the line when somebody says the MARL line, and that's what's been filed for certificate before this Commission; is that correct?

A. That's correct, yes.

Q. Okay. And then once it changes from pink to --- actually, let's go to page 11 because that's the actual current ---

A. Scope.
Q. --- scope of it, right.
A. Yeah.
Q. So once it goes from the light pink to blue, Potomac Edison picks that up and that's a separate certificate, is --- is my understanding, not in front of this Commission now or not in front of any other Commission, but it's a separate certificate for that portion of the western cluster solution; is that correct?
A. Correct.
Q. Okay. And has --- and part of that goes through West Virginia; is that correct?
A. Correct.
Q. Has that certificate been filed before this Commission?
A. I am here to speak, sir, to the --- only the need and the process and the selection.
Q. So you don't know whether it's been filed or not?
A. I would prefer that NextEra or FirstEnergy speaks to that.
Q. Well, I'm trying to figure out how all these pieces work together. Would it make sense to build the pink portion of the line without building the blue portion of the line?
A. I believe we are eventually, with the assistance of

this Commission, other Commissions will be successful in building the entirety of it.

Q. I understand that is your testimony. The question I have is, is does it make sense to just build the pink portion of the line without building the blue portion of the line?

A. For the line ---.

Q. For --- for your purposes, for reliability purposes, do all these pieces need to be built or can part of them be built?

A. Postage stamp answer, we can proceed with building parts of it. Like, as I explained to Mr. Stephenson, that we can and we are working hard on advancing components of Woodside to assist us with the voltage issues while the thermal issues are addressed by building the line itself. Now, for the line --- for a conductor to be used and useful, it has to terminate at least between two substations. And --- and I don't know if --- if --- if you are trying to allude to the fact that all deals or all transmission owners must submit the CPC hands to the second arm of the clock exactly at the same time it obtained --- it has to be sequential, right.

Q. I'm trying to figure out how these all work together because there's timing involved in all this stuff and this Commission needs to know that there is a further

certificate that's coming before them that they will have to decide ---
A. Yeah.
Q. --- on that is key to whether this line makes sense or not.
A. So, ---
Q. And ---.
A. --- I hope that I can speak on behalf of FirstEnergy, sir, but I'm just not in that capacity.
Q. Okay. Well, how about I can tell you that it hasn't been filed before this Commission.
A. Thank you.
Q. So --- and you just said that. So the Woodside substation, you have to have --- the line has to connect between two substations; correct?
A. For it to carry flow.
Q. So from where it goes from pink to blue and then to the Woodside station, that has to be built and then the Woodside station has to be built in order for the MARL line to work?
A. Parts of your articulation is correct and parts is not. Woodside in itself offers value on and so on without the line.
Q. Sure, sure.
A. But for the line to provide usefulness, to be used

and useful, it has to connect and terminate at least between two substations.

Q. Right, right. And --- and --- and maybe you won't be able to tell me this, but do you know what the status of the Woodside substation is? Commissioner Raney's been asking this question all day long and hasn't really gotten a good answer yet. So do you know what the status of the Woodside --- Woodside station is?

A. I --- I don't want to put words and --- and NEET's staff mouth, but I thought that I hear the substitution is being currently worked on. The permitting is certainly being worked on.

Q. So, I mean, but you're the PJM planner. I mean, you should know the status of the projects that you say are necessary to keep the lights on. So you can't tell me the status of the rest of these projects at all or you're just going to defer to --- to --- to NEET on that? I mean, this is --- it's ultimately your responsibility, right?

A. It is and my knowledge is that the CPCN has not been approved --- sorry. Has not been submitted because we will be notified, but there might be interim approvals that the transmission owner might be working on.

Q. Okay. And --- and further about the Woodside substation, I think Mr. Colley testified about this. The

138 --- the Woodside substation is key to providing the support to the 138 system in this area; is that correct? I believe in your testimony, that was a part of the reason why MARL was picked over everybody else was specifically because of that substation and the --- the support it gave to the 138 system.

A. It's not only to the 138. So, definitely it provides support to the 138 kV system, but it also provides support to the pre-existing 500 kV infrastructure ---

Q. Right.

A. --- to assist us move power from the west to the east.

Q. But in terms of where people are asking how this might help West Virginia, the Woodside substation is the key to helping support the 138 and also prevent the voltage drop, as Mr. Colley testified?

A. That's partially correct and I tried very hard to explain that to Mr. Hanna, my highway example.

Q. Sure.

A. Since you brought it up, I would like to highlight that again to make sure that the message is conveyed. So building a parallel interstate line, even without as many off ramps and on ramps does not mean that the communities along the new route does not benefit. They benefit from

maintaining the resilience and the reliability of the pre-existing infrastructure that saves --- that helps them that way.

Q. Okay, okay. We can just move on. On page 64 of your Direct Testimony, you list some --- the criteria that you used in selecting --- ultimately selected MARL and one of them caught my eye. The third one is impacting utilizing existing rights of ways where possible and efficient. There's been a lot of talk about that about paralleling existing transmission facilities. Isn't there a little bit of an opposite effect, even though it's maybe lesser impact, but it also is overburdening existing properties that have burdens on them already?

A. It's all related, but I do agree with you, yes. Any infrastructure project will unfortunately have direct and indirect impacts on --- on the folks who reside along it or live in the area that it will exist in.

Q. So at what point does it become negative? Are two transmission lines on a property too many? Are three transmission lines on a property too many?

A. I think that's very subjective. In some communities, folks don't mind the transmission lines. In some communities, others will prefer less transmission lines. And the same goes also for other infrastructure

projects like light rail. It's not only transmission lines.

Q. So that would be a case-by-case determination is what you're saying?

A. I think so.

Q. Okay. I want to talk to you a little bit about your Rebuttal Testimony. The upgraded analysis that you did, I didn't quite understand the baseline of where it started from. So can you explain to me, did you start with the 2022 Window 3 case or did you start somewhere else in this updated analysis?

A. So --- so, in its simplest form, we sensed from the questions that, particularly the state Commission Staff sent our way, is that there might be a misunderstanding that some of the additional planned 765 kV lines that enhance the west east transfer may obviate the need for MARL. So we decided to take a very firm look at that to make it a transparent pitch. And what we did is that basically we proved that each of the three lines will be required on the individual lease.

Q. I understand your testimony was. I was asking the analysis that you performed where you put the two Valley Link projects in and took the MARL project out, what was the starting point of that study? Was it information? Was it based upon 2025 load? Was it based upon the ---?

A. I see.
Q. Was it based upon the 2022 Window 3 analysis? What was the starting point?
A. I believe we already mentioned in the Rebuttal that it was based on a 2031 scenario.
Q. So that would be the 2026 study?
A. It would be the 2026 study that utilized the 2025 ---.
Q. Okay. So a fairly --- a fairly new load forecast and a fairly new --- would that analysis have included or left out the 2.7 gigawatt Prince --- Prince William data center that was canceled in July of this year?
A. Excellent question. I don't know and we do not do --- and this is more of Andrew's department to answer. But what I know is that PJM, when we develop a plan, it is based on a forecast that is not reliant on individual projects. It's more of an econometric forecast. Of course, it pulls in information from individual projects, but it does not necessarily rely on just one project data point.
Q. So you testified earlier that it's very important, like a generator is very important to model because it's 1,000 megawatts and here is 2.7 gigawatts of power --- of load that are disappeared. And you can't tell me whether that's included in your analysis or not. Doesn't that

seem a little unbalanced?
A. So what I'm trying to convey, sir --- we might be talking the same thing, but your understanding of --- of the issue is way different than mine.
Q. Okay.
A. I'm trying to convey --- as you ask more questions, it's becoming clear to me that you are thinking that if we had modeled Project X, let's say Prince William County Project X in the case, I will model it or PJM will model it with --- at the capacity level that they applied for. That's not correct.
Q. Okay.
A. So if --- if you have a two point X or two gigawatt project in one year and decided another two gigawatt project, I'm not going to put four gigawatt something in just one year. So --- and Andrew, Mr. Gledhill can walk you through that in full detail.
Q. Okay.
A. Yeah.
Q. Okay. So --- so you wouldn't had all 2.7 gigawatts of that one customer in this load forecast?
A. Not necessarily, no.
Q. Not necessarily, nut you can't say for sure one way or the other?
A. It depends on how the forecast is built. But the

forecast does not rely on one project or not. And, again, Mr. Andrew has his turn on the stand and he will be more than happy to clarify this with yourself.
Q. Hold on just a minute. You've been over this with a few people. But I just want to clarify this about the drivers. And I understand there's --- there's four drivers for --- for the need, right. But the need for this specific line in this specific set of solutions is being driven by the load that's in Northern Virginia. In other words, if the load was growing somewhere else, we would be looking at a different set of violations and a different set of solutions; is that correct?
A. No, it's not correct. So as I clarified, this line, although at some instances may be getting close from east to west, not from west to east, but because of the more --- the more deficiency engineer --- load in eastern PJM --- if I --- if I --- if I may --- please be patient with me. So that --- the line will carry the flow that's dictated by the imbalance between generation and load. So if you have a specific area that has its load increasing, it will pull more ---
Q. Sure.
A. --- toward the west. If you have generation deactivating, it will compound the issue. So I'm just trying to be extremely clear that MARL and the west to

east transfers are not only tied to load increase, but it's tied to the net demand in eastern PJM from western PJM due to higher load and lower generation levels.

Q. Okay. So it's the --- the deactivations are also driving it in eastern PJM?

A. Correct, sir. And --- and also to be fair and strike a good balance --- and I put that in my testimony, both Rebuttal and main testimony, that Virginia already, we have modeled 2.4 gigawatts of offshore wind and more than a gigawatt and a half of gas fired generation. And they are backing --- Dominion is packing more three or four gigs to be developed in West Virginia. That is underway. So --- so it is --- what I'm trying to convey is there is need for more flow from the west to the east. The LDAs in the east are not just sitting and adding to the problem. They are starting to also contribute to the solution.

Q. By adding generation as you just ---?

A. By --- by putting in generation, yes. One of the solutions is by putting in generation, yeah.

ATTORNEY AUVILLE:

Yes. Okay. That's all I have.

A. Thank you very much.

CHAIR:

Ms. Wilson.

ATTORNEY WILSON:

Yes, I've got a few questions.

CROSS EXAMINATION

BY ATTORNEY WILSON:

Q. Looking at your Direct Testimony on page 25, starting around line 25, you indicate that --- that there are some operational safeguards that are in place that would prevent a system overload. Can you describe what those safe --- safeguards are?

A. Yeah. So --- so one of the first operational safeguards is that if the market is --- so --- so the operator start operating from it --- let's assume that the operators start with operating with a healthy state of the system. If they start to see a condition under which a specific outage may lead to an overload instead of starting to trim load right away, they will see if there is a reconfiguration in the network that could be implemented that can isolate the impact of the outage, or they may look into subeconomic dispatch, like bringing in generation in that constrained area to avoid out of minute, to avoid the constrain from happening. This could transpire into conditions of LMP separation, price separation that Mr. Colley was trying to explain earlier. So when --- when you do that, you will bring up generation that can offer into the market at a

significantly high price because the system needs it. There is no other way of maintaining reliability without dispatching generation. So --- so in short, we can --- we can reconfigure the system to avoid the outage, sorry, to avoid the impact of the outage or the overload, or we can dispatch out of merit and both of them has their impacts. If --- if neither one is able to address the violation within a very specified time frame system operation, and I think that's within 30 minutes, we'll have to take actions by cutting load or cutting generation.

Q. Okay. Can I ask you, do state laws such as the Virginia Clean Economy Act impact PJM decisions regarding transmission planning?

A. We --- not directly, but --- and I thank you for the question to explain how the process works. On an annual basis, PJM initiates an RTEP planning cycle. Part of that cycle is to schedule a number of meetings to discuss with stakeholders which the states and its bodies are part of and welcome to attend and they do have, provide PJM with input as it relates to its load forecast and as it relates to its generation assumptions. So, for example, if a specific state has a policy that is approved that's in effect to retire specific type of generation, we cannot just turn a blind eye to that in

order for us to maintain liability. We can decide to plan to it through communication with that state or study it as a sensitivity to show the implication of --- of such action, out of which we may decide to build transmission or put the units on --- on reliability must run order and so forth. So they do not blindly --- those policies do not blindly transpire into PJM planning to them, but they will be part of the overall stakeholder discussion that takes place. Or the state can decide, like what New Jersey did, to go the path of a state agreement approach where they will accept full 100 percent recovery of the transmission impact through their own rate payers and not impose those impacts on other states.

Q. Uh-huh (yes). How do moratoriums impact load growth predictions in PJM?

A. Can you rephrase your question, please?

Q. Do you know how PJM takes into consideration moratoriums on, let's say, new data centers being built? How would that impact your load growth predictions?

A. I would prefer to leave that to Mr. Gledhill and he would be more than happy to walk you through it. That's his --- his expertise.

Q. Okay. Can I ask, do you anticipate that the FERC show cause order would, in the future, impact PJM

transmission planning and load growth predictions?
A. The future could be different from how we conduct business, but that's good. That's good. And by the way, the show cause order, to the best of my knowledge, is forward looking, not retractive. Meaning that decisions that have been made under the well-established processes and approved processes by FERC will prevail. Like we are not --- FERC is not planning to go backwards and replan everything that's already through the pipeline.
Q. Okay. Just to backtrack just a little bit, cover some ground that's already been covered. I know you discussed the 50/50 formula and how costs are allocated. Can you tell me how long that formula has been used or how long it's been in place?
A. For a very long time. I think maybe close to 20 years, but we can --- we can confirm that. I was --- I was not there in PJM at that time.
Q. Okay. So that's not something that --- that --- that's been recently put in place ---
A. No, no.
Q. --- or recently updated?
A. No, no, no. It has been in place for --- for --- for a relatively long time.
Q. Okay. Let me just double check. A couple more questions here. Now, I believe in your Rebuttal

Testimony you indicate that PJM conducts additional and continued analysis of the need for --- for certain projects. Was --- was all the information that was available to PJM at the time the application was filed, was all that provided with this application?
A. I --- I believe so. I don't understand the question fully, but we answered --- we --- we did our best attempt to answer the question that was asked. And if you can point me to a specific question, maybe we can put that in more context. I think the question is a bit vague.

ATTORNEY WILSON:

I don't --- I don't think I have any other questions. Thank you.

CHAIR:

Okay, thank you. Interveners. Yes, sir. Well, let's just keep going in the order that we had first. All right. So before we start, I think that after --- after we finish with this witness, we will recess for the evening and start again tomorrow if that is not objectionable to anyone. And it's also possible that the Commission may have to take a recess before we finish with this witness because we have something that we have to get out tonight. So proceed.

MR. HAYNES:

Yeah. The hour's late.

CROSS EXAMINATION

BY MR. HAYNES:

Q. So Dr. Abdulsalam, thank you. So I'm going to say the obvious. I guess it seems like the possibility of a regional grid failure is a major driver for --- maybe the driver for MARL; is that correct?

A. Correct, sir. Together, part of the overall planning portfolio that we push through this window and other consecutive windows.

Q. What are the odds of a regional --- I don't want to be parochial. I'm just asking. What are the odds that a regional grid collapse would impact West Virginia given that we're a huge exporter of power?

A. So our job is not to paint a very dark picture and scare people. Our job is to maintain reliability to the best we could and you bet we will, but there will be a price. So when we say that there's a potential for a major collapse or an overload, that doesn't mean that the collapse necessarily is going to happen. It means that PJM will have to either build to it or manage it. And if we run out of operational tools, as I was just explaining to the Commission Staff lawyer here, we will not have anything in our hand, but to start knocking off load. And that amount of load is not going to be 10 megawatts or 20 megawatts or 30 megawatts. It's going to be a

sizable amount of load and that has a major impact, a major impact on the reputation of our footprint, our ability to attract economic opportunity, and just openness of developers to bring their business to --- and open for business establishment. These are not simple things.

Q. Sure. And this is really complex and nobody is disputing the complexity or the importance of anything of what you do or what PJM does. To Commissioner --- I'll just say this real quickly as kind of a note of humor to Commissioner Raney's note that this is complex. The --- I think the reason in this editorial note, the reason for the complexity is one word, Enron way back when. But anyway, you're not planning to something that has a zero percent chance of happening? You've got to have some sort of sense that this could happen and there's some odds there could and --- yeah.

A. So what I can tell you sir, that as I was explaining here multiple times, that the difficulties that we are --- we're anticipating to start facing in 2027 have been materializing not this winter, but this past one in January. And we are under a very stressed condition to the level that folks in --- in Maryland are accepting today, almost $100,000,000 bucks annually, the cost of running RMRs, let alone the LNP separation and this is a

fact. This is not going to go away.
Q. Okay.
A. And this law is already established. We are not waiting for new law to show up.
Q. Sure. So would the construction of additional --- and this ---- so I'm just kind of reiterating. So there's two parts of the formula, shed load or increase the amount of generation. But would the construction of additional baseloads of plants in Virginia, which I guess is the nation's largest importer of energy, right, or Maryland, which is a huge importer of energy, decrease the odds of a regional grid collapse?
A. Excellent question. Although it is really comforting to know that some plants backed by Dominion Energy will be built hopefully very soon of sizable amount, not all of it is happening inside the area or the envelope that the load is growing or the generation is retiring. Some of it is like CVOW and the Chesterfield plant that is combined cycle work just shy of two gigs of capacity, that --- the new plants that were announced are actually in the west, in West Virginia and they will be utilizing the existing and planned west to east corridor to bring that capacity from western PJM towards eastern PJM. So it's not only bringing the capacity. That's a major challenge on its own. But also its location has to

match in order for you to eliminate the need for a transmission upgrade.

Q. It's complex. So you had stated that --- I thought it was three primary drivers and somebody else said four. But the three I picked up, three primarily or primary drivers of the grid reliability issue, load growth in Dominion, PEPCO, MidAtlantic and so on, baseload plant for retirements, and you mentioned about 11 gigawatts of plant retirements ---.

A. And electrification.

Q. And --- I'm sorry?

A. Electrification.

Q. Yes. Oh, yeah. Bingo. And which is a load growth thing. And then third was the impact of resource mix on the nature of the, you know, that capacity really. So I wanted to kind of get to that a little bit and I think probably we're largely alluding to renewable solar and wind, which have had --- as you've said, they're different. How much solar and wind capacity has PJM allowed onto the grid in the past 20 years?

A. I do not have a very solid number. But the solar figure is healthy. I think we are at about 15 to 20 percent capacity installed ---

Q. That's capacity?

A. --- between --- between solar and --- like --- like

nameplate, nameplate, nameplate capacity, ---
Q. That's right.
A. --- about between 15 and 20. And this is public information. You can go now on PJM's website and it will give you the exact ---.
Q. Could you put that in gigawatts? How many --- how --- how capacity in terms of gigawatts? I think I have a range here, but I wanted to ask you what it is.
A. Between --- I would say between 20 and 25 gates.
Q. Okay. That's a little higher than what I've seen, but yeah, probably quite credible. And you have probably hundreds, I think, of wind and solar plants in the queue that you may or may not allow onto the grid in the future; is that correct?
A. We have hundreds of gigs of new capacity in the queue, yes.
Q. Yeah.
A. And we are starting to see a more balance between renewables and conventional generation showing up part of our cycle one generation process.
Q. So last year, I happened to catch a hearing, a joint hearing in the West Virginia legislature. It was a joint energy and public works hearing, I believe, was the correct term with that. And PJM was testifying and you all had a chart and it was showing that the term --- it

was using the term effective load carrying capacity, which is the ability of a source to contribute to the grid effectively in times of high demand. And on that chart, PJM showed that solar reliability was nine percent, right, and that wind was at 35, which seems to be a little high given what I think you said earlier. So given that these sources are essentially kind of not really what you are going to rely on in terms of high grade demand, you know, in other words, times where the grid might collapse, isn't --- it's some of PJM's, in essence, poor planning to allow all of this stuff onto the grid that's maybe causing the problem? That's a loaded question, but I wanted to ask it anyway.

A. You are giving PJM superpowers that we would hope that we have. Unfortunately, we don't. So PJM does not have the jurisdiction to prevent a developer from taking away their generation. If we see negative reliability impacts, what we can do is that we initiate the RMR, the reliability must run negotiation process to hopefully convince the developers or the generation owner to stay with compensation for a period until either new capacity shows up or build transmission for it.

Q. But whether it's, you know, PJM's fault or not, it's still the fact that more and more of this stuff keeps getting loaded onto the grid to the perhaps deficit of

more baseload power coming onto the grid. That is a good deal of the cause of this. And again, you just said, I think, what, 20 to 30 gigawatts has been allowed onto the grid in the past 20 years. And yet, the deficit that's been cited as where we are now and, you know, the cause of this problem is 11 gigawatts. It just seems like this is --- we've shot ourselves in the foot here.

A. And I understand that this Madam Chair is a bit not necessarily closely tied to the subject of, at least from my eyes or the subject of my testimony, but it has to do with contractual issues with PJM. So I will take the liberty to --- to respond. PJM serves a diverse group of stakeholders and the value proposition that's alluring to different stakeholder groups could vary. Some folks value the dispatchability and they do not value in front of it necessarily solar and wind. Other groups may see things differently. And we operate within the box or the jurisdiction, rights and boundaries that we are given.

Q. Senator Moynihan once said something about you're allowed your own opinions but not your own facts. I'm not speaking to you. But the fact is that more and more, the higher and higher percentage of, you know, wind and solar you put on the grid, the less reliable the grid ---.

A. So let me clear with you something ---.

CHAIR:

Mr. Haynes, ---

MR. HAYNES:

I'm sorry.

CHAIR:

--- I think you've made your point. He's probably never going to agree with you. So let's ---

MR. HAYNES:

Well, I'm asking the question.

CHAIR:

--- let's go on.

MR. HAYNES:

Just asking the question. Okay.

BY MR. HAYNES:

Q. So two other things. The --- as was testified to earlier, there are strategy of this line that parallel --- of MARL, if it's built, that will parallel the 138 --- existing 138 kV lines; is that correct?

A. Correct.

Q. And the right of way is 200 feet for MARL, is 200 feet wide. And I think 138 kV lines are --- the right of way is 100 feet, right?

A. It will --- it will vary depending on the structure type.

Q. So the towers that --- the MARL towers, I believe,

most of them were 160, 170, 180 feet high or possibly higher; is that correct?
A. 500 kV lines are high, but I think Ryan already covered that at length.
Q. Yeah.
A. It's been heavily ---.
Q. So the scenario is possible where there are tornado --- and this has happened in states like Indiana, Texas, North Carolina, Mississippi where a tornado has come through and collapse transmission towers. This is not a fantastic scenario. Is it possible that that could happen? That one of these towers might fall over and collapse onto 138 kV line?
A. That's possible. And that's also one of the factors where PJM is extremely careful in considering double circuit 500 kV. So that topic was touched on and mentioned briefly in an earlier Cross Examination. I don't remember if it was --- it was with one of NextEra's witnesses. But keep in mind that you can physically mount as many circuits on one tower, but the problem is will you be able to manage the impact of such an outage?
Q. Yeah.
A. Not only the outage, but also accessibility to the tower while maintaining continuity of supply to the remaining circuits. So if you mount three or four

circuits on one tower or even two, for safety reasons, you might be able --- you might need to force the four circuits offline in order to safely --- for the crews to safely operate on it. A broken conductor on a top circuit can negatively impact every everything underneath it ---

Q. Sure.

A. --- to --- to your point. So it is not as simple as, oh, just put all of these circuits on one tower. Everyone is happy.

Q. No, that was not where I was going. I was just saying --- I guess a smart wag might say, well, in this instance, the MARL is increasing the risk on the grid because the possibility of collapse onto 138 kV line.

A. So --- so let me correct that, too.

Q. Yeah.

A. If the 138 kV system and the line and the 500 kV line that gets mounted on the same structure are serving different purposes, that would be a plausible option. Why? Because knocking down the 500 will have its own impacts that's isolated from the impacts of knocking down the 138 because the 138 could be serving a way more local area that has a backup supply from somewhere else.

Q. Okay, all right.

A. So, but the higher voltage you mount on the same

towers, the way bigger the risk is.
Q. Yes, okay. Finally, I was just going to ask a question --- because this is complex. And your analogy about --- you know, you can use water analogies or the interstate highway vision of this. But is it not true that the interstate highway analogy is a little imperfect in the sense that --- in the case of the grid, one of the locations that might be analogous to a city or something in the interstate highway, those locations could actually themselves or a destination could actually itself alleviate the problem of the traffic jam. So it's not an exactly, I don't think, is it, a perfect analogy?
A. I offered it to simplify the concept.
Q. Yeah.
A. I did my best.
Q. Yeah.
A. You might not agree with it, but to my point of view, I think it's reasonable.

MR. HAYNES:

Okay. Thank you very much. You got to be worn out.

CHAIR:

Now, I have a question of the other interveners. Were you going to be here tomorrow? Okay. Since you're going to be here tomorrow, then we will

finish up with the interveners tomorrow with this witness and with Commissioner Larrick, myself and Commissioner Raney. We will finish up tomorrow and thank you all for your patience and we will see you tomorrow.

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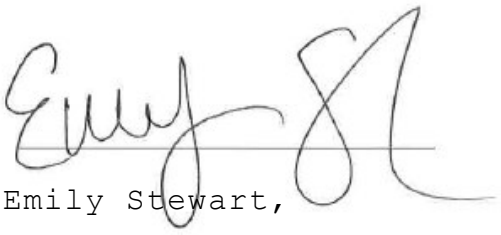
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CERTIFICATE

I hereby certify, as the stenographic reporter, that the foregoing proceedings were taken stenographically by me, and thereafter reduced to typewriting by me or under my direction; and that this transcript is a true and accurate record to the best of my ability.

I certify that the attached transcript meets the requirements set forth within article twenty-seven, chapter forty-seven of the West Virginia Code.



Emily Stewart,

Court Reporter