

1 what you said is combination projects?

2 Q. It's probably easier to mark an exhibit.

3 (Whereupon, Etheridge Deposition Exhibit
4 5, Transmission Expansion Advisory Committee Market
5 Efficiency Update, marked for identification.)

6 BY MR. GUNDERSON:

7 Q. All right. The court reporter has marked
8 as Deposition Exhibit 5 the Transmission Expansion
9 Advisory Committee Market Efficiency Update by PJM
10 dated March 10, 2016, which is also Exhibit
11 TJH-R11, which was attached to Mr. Horger's
12 rebuttal testimony in this case.

13 If you turn -- I guess first, is this the
14 March 2016 market efficiency update that you have
15 reviewed in this case?

16 A. Yes.

17 Q. If you turn to page 19, --

18 A. Yes.

19 Q. -- this is the summary of PJM's
20 observations from its updated analysis at that time
21 of I believe, correct me if I'm wrong, the "top

1 ten" proposals that it received to -- in the
2 2014/'15 open window?

3 A. And we're talking about 19 -- page 19 of
4 this exhibit?

5 Q. Yes.

6 A. These are PJM's observations from its
7 updated analysis of market efficiency projects at
8 that time; correct.

9 MR. DEAN: I think you want 21.

10 MR. GUNDERSON: Yeah, I'll get there, I
11 think.

12 THE WITNESS: I --

13 BY MR. GUNDERSON:

14 Q. All right. I thought I had something to
15 ask from 19, but if you'd turn to page 21, slide 21
16 of this exhibit, you will see this is where PJM
17 identified combination projects, and so the top
18 four finalists that PJM evaluated after March 2016
19 was Project 9A and then the three combination
20 projects that are identified on page 21 of Exhibit
21 5?

1 A. Correct, and that's what I mentioned
2 earlier, that with the three finalists, PJM
3 compared each of those three finalists that weren't
4 Project 9A, that being 18 H, 19 B and 19 D, with
5 the east portion of Project 9A.

6 Q. Right.

7 A. That's what I mentioned previously as
8 well.

9 Q. Right. But these combination projects
10 are different than the 41 proposals that PJM
11 received in the '14/'15 open window, correct?

12 A. These are different, just as Project 9A
13 wasn't as it was proposed any more.

14 Q. Okay.

15 A. It had changed.

16 Q. But these --

17 A. Many other projects had also changed.

18 Q. Right. These three combination projects
19 are in addition to the 41 proposals that PJM
20 received in the '14/'15 open window; is that fair
21 to say?

1 A. It's fair to say they're combinations of
2 components that were proposed amongst the 41
3 proposals that they received for group A and a
4 component that was outside, not group A, but I mean
5 group one, and a component that was not proposed in
6 group one, which is beyond the 41 you're even
7 talking about.

8 Q. Okay. The purpose of these combination
9 projects was not to evaluate the IEC-East project
10 versus the IEC-West project. It was PJM's attempt
11 to try to determine whether Project 9A as a whole
12 was, in fact, the best solution to addressing the
13 market efficiency problems that PJM was trying to
14 address?

15 A. This was a comparison, as you say, of
16 Project 9A as a whole in the left column against
17 three proposals that only had a western segment.

18 The only way to compare those three
19 western projects was to add the IEC-East project to
20 give an apples-to-apples comparison to Project 9A.

21 Q. So, it's your opinion that PJM in

1 conducting its analysis of Project 9A as compared
2 to the three combination projects was that it was
3 evaluating only the IEC-West project?

4 A. If the IEC-East project is in each of
5 these projects, then when you're looking at
6 differences, all you're doing is isolating
7 differences associated with the IEC-West project.
8 That's all you're getting.

9 Q. Is that your understanding of the intent
10 of that, that that was PJM's intent in conducting
11 this top four analysis?

12 A. I don't know what --

13 MS. McLEMORE: Objection. Form.

14 THE WITNESS: I don't know what their
15 intent was. They simply presented this particular
16 analysis.

17 BY MR. GUNDERSON:

18 Q. All right. You agree that PJM and
19 Transource have now reviewed and analyzed six
20 conceptual alternatives during the course of the
21 CPCN case, correct?

1 MS. McLEMORE: Objection. Form.

2 THE WITNESS: I know of the five; four
3 PPRP conceptual alternatives, a 3A, and are you
4 suggesting that the sixth would be Lanzalotta?

5 BY MR. GUNDERSON:

6 Q. No. Conceptual Alternative 2A, the third
7 transformer of Conceptual Alternative 2.

8 A. Then it would be more, because there
9 would be Conceptual Alternative 1, then 2, 3, and 4
10 with and without the transformer.

11 Q. Right.

12 A. So, that's seven.

13 Q. Okay. You're right.

14 A. And then a 3A. No. That's --

15 Q. That's seven.

16 A. That's the seven.

17 Q. All right.

18 A. We'll go with seven.

19 Q. So, you agree that PJM and Transource
20 have now reviewed and analyzed seven conceptual
21 alternatives during the course of this CPCN case?

1 A. Yes.

2 Q. And including Conceptual Alternative 3A,
3 which PJM analyzed using its market efficiency
4 analysis tools since it passed all reliability
5 screenings, correct?

6 A. They have performed a market efficiency
7 calculation that they presented in -- in rebuttal
8 testimony.

9 Q. And included in the analysis of
10 Conceptual Alternative 3A is also projected cost
11 figures for Conceptual Alternative 3A, correct?

12 A. That's what was presented in Mr. Horger's
13 testimony, which I haven't seen any detail on,
14 other than the table he presented.

15 Q. And do you agree that none of the
16 alternatives that PJM has analyzed, whether in the
17 2014/'15 open window process or during the course
18 of this CPCN case, have been shown to be superior
19 to Project 9A at reducing congestion?

20 MS. McLEMORE: Objection. Form.

21 THE WITNESS: Yes.

1 MS. McLEMORE: This might be a good time
2 for a break, too. It's 2:45.

3 MR. GUNDERSON: That's fine.

4 (Recess taken -- 2:45 p.m.)

5 (After recess -- 2:56 p.m.)

6 BY MR. GUNDERSON:

7 Q. Were you involved in the PATH project?
8 Involved in reviewing the PATH project?

9 A. Yes.

10 Q. What was your involvement?

11 A. I was supporting PPRP and, in particular,
12 at the time Sandi Patty in looking into that
13 project and other large transmission projects that
14 were at issue in that time frame.

15 Q. Do you agree that the -- that the
16 alternatives analysis that has been conducted by
17 either Transource or PJM in this case with respect
18 to Project 9A was more thorough and robust than the
19 alternatives analysis that was conducted with
20 respect to the PATH project?

21 A. I don't recall the alternatives that were

1 presented associated with the PATH from memory that
2 would enable me to answer that question.

3 Q. Well, do you at least recall that with
4 respect to the PATH project, there was no
5 additional alternatives analysis performed by
6 either PJM or the transmission developers in that
7 case after PJM selected the PATH project and
8 executed its designated entity agreement?

9 A. I don't recall what additional analysis
10 was done after the application for the PATH was
11 filed or prior to. It's been quite a few years.

12 Q. And do you recall whether PPRP proposed
13 any conceptual alternatives in the PATH project
14 case?

15 A. We did not get to the point of testimony
16 in the PATH case, from memory. Yeah, it was the
17 MAPP case where we got to the point of testimony.
18 So, we would not have been discussing or we did not
19 discuss conceptual alternatives as part of the
20 investigation of the PATH project.

21 Q. So, would you agree that the

1 alternatives, the analysis that PJM and Transource
2 have conducted with respect to Project 9A and, in
3 particular, with respect to the seven conceptual
4 alternatives is more than what was conducted with
5 respect to the PATH case necessarily because the
6 PATH case didn't involve conceptual alternatives?

7 A. To the extent that there's conceptual
8 alternatives, and we count those as numbers,
9 they're numbers. How robust is that analysis is a
10 different question all together. But, yes, there
11 are alternatives that have been studied as part of
12 this process in this case.

13 Q. Right. Now, do you recall what the
14 purpose was for the PATH project, what it was
15 trying to accomplish?

16 A. Could you refresh my memory as to what
17 the PATH stood for?

18 Q. I can Google it.

19 MR. CURRAN: Transmission Highway -- what
20 was the P and the A?

21 THE WITNESS: Pennsylvania Allegheny.

1 MR. CURRAN: Does that ring a bell?

2 THE WITNESS: It sounds like the trail
3 project.

4 BY MR. GUNDERSON:

5 Q. Potomac Appalachian Transmission High
6 Line.

7 A. Mr. Gunderson, could you give me the
8 origination and termination for the proposed PATH
9 project, please?

10 Q. The Emos Substation in Putnam County,
11 West Virginia to a new substation to be constructed
12 in Frederick County, Maryland.

13 A. Camptown. I can visualize it on my map.
14 That's very helpful. Thank you. Could you repeat
15 the question?

16 Q. Sure.

17 A. I have taken us away from the question.
18 I apologize.

19 Q. And you recall what the PATH project was
20 trying to accomplish?

21 A. The PATH project was trying to provide

1 another path for moving power from West Virginia in
2 an easterly direction into the Dominion-Allegheny
3 system, APS, or we can also call it -- not A -- APS
4 system, but generally, to move power from west to
5 east to reduce congestion reliability concerns.

6 I forget specifically what it was that
7 was the foremost, but it was very forward looking
8 in terms of what PJM was thinking about at the
9 time.

10 Q. If PATH was -- would have been
11 constructed, would it have reduced the congestion
12 that Project 9A is designed to reduce?

13 MS. McLEMORE: Objection.

14 THE WITNESS: As another transmission
15 line from west to east, it would have reduced the
16 overall problem that PJM was trying to solve with
17 its solicitation for which 9A was bid into and also
18 the same congestion that 9A is suggested to
19 resolve.

20 BY MR. GUNDERSON:

21 Q. Were you also involved in the MAPP

1 project? M-A-P-P.

2 A. I was involved in the MAPP project.

3 Q. How were you involved in that project?

4 A. Again, I was working with the Power Plant
5 Research Program, and particularly Sandi Patty, and
6 I drafted testimony in that particular case.

7 Q. And do you agree that the alternatives
8 analysis conducted by Transource and PJM in -- with
9 respect to the Project 9A has been more thorough
10 and robust than the alternatives analysis conducted
11 with respect to the MAPP project?

12 A. To the extent that we count alternatives
13 that have been studied, they're more than the
14 conceptual alternatives that were looked at when we
15 were investigating the MAPP, but they're different
16 projects. But, yes, you can count conceptual
17 alternatives. That doesn't necessarily mean that's
18 a robust indicator of the solution before the
19 commission.

20 Q. So, you don't have a position on whether
21 the alternatives analysis conducted in this case is

1 more or less thorough than either the MAPP or the
2 PATH cases?

3 A. In the context of this particular case
4 where we have a situation of a proposed 230 kV line
5 down the middle of existing underutilized
6 infrastructure, it's so readily apparent that that
7 infrastructure should be studied. That's different
8 than a MAPP or a PATH case. We're talking about
9 very long lines, greenfield lines to get power from
10 one point to another.

11 You may in such an expansive PATH case or
12 MAPP case look for potential where you could site a
13 500 kV line on top of an existing 500 kV and make
14 it double circuit. But who would? It wouldn't
15 make any sense for an extended period of time.

16 So, you're almost saying were the
17 conceptual alternatives in MAPP and PATH -- were
18 there alternatives like this case where conceptual
19 alternatives could have been developed? They're
20 apples to oranges.

21 This case being, let's shall we say, the

1 apple where you run a 230 down the middle of
2 underutilized transmission infrastructure as
3 opposed to a several hundred mile 500 kV line that
4 you're not putting on top of another structure. It
5 won't happen.

6 Q. Okay. What if we focus on the
7 alternatives analysis that PJM conducted prior to
8 selecting the project, would you agree that PJM's
9 alternatives analysis with respect to Project 9A
10 was more thorough than the alternatives analysis
11 that PJM conducted with respect to the MAPP
12 project?

13 A. Not with regard to the IEC-East project,
14 which I think was a flaw in PJM's analysis as I
15 testified in my direct testimony. I think with
16 regard to, say, the PATH or the MAPP project, PJM
17 probably put a good deal of thought into that. The
18 developers put a good deal of thought into it, but
19 the fact that you have run a competitive
20 solicitation recently and looked at multiple
21 proposals in other geographic areas of the country

1 doesn't in any way suggest that this has been more
2 thorough than the work that went into those very
3 long 500 kV lines.

4 Q. If a transmission developer had proposed
5 Conceptual Alternative 3A in the '14/'15 open
6 window, would you expect that Project 9A would have
7 still been selected by PJM as the most cost
8 effective solution?

9 MS. McLEMORE: Objection. Form. Vague.

10 THE WITNESS: I have not looked at the
11 details of the cost-and-benefit analysis of 3A, so
12 it's premature to offer an answer to that question.

13 BY MR. GUNDERSON:

14 Q. So, have you formed an opinion as to
15 whether you would recommend that the commission
16 direct the construction of Conceptual Alternative
17 3A?

18 A. No, I would not. No. My recommendation
19 is that the commission try to solve this, bring
20 more expertise to bear than it has to date, where
21 PPRP is simply trying to investigate potential uses

1 of infrastructure.

2 Q. If the commission decides that it wants
3 to reduce congestion in Maryland and the
4 surrounding region and also resolve the emerging
5 reliability violations that Project 9A would
6 resolve, would you agree that Project 9A is the
7 superior option to Conceptual Alternative 3A?

8 MS. McLEMORE: Objection. Form. Calls
9 for speculation.

10 THE WITNESS: Again, I haven't reviewed
11 the cost-benefit analysis to render an opinion on
12 the question.

13 BY MR. GUNDERSON:

14 Q. With respect to Conceptual Alternative
15 3A, how many miles of existing transmission line in
16 Maryland would need to be wrecked and rebuilt?

17 A. The 1.4 miles approximately. That's my
18 understanding of the portion of the Manor-Graceton
19 line that BGE owns from the Graceton Substation to
20 the Pennsylvania-Maryland border.

21 I saw some recent information from

1 possibly one of the witnesses that there's
2 something like 1.3 miles that's on existing old
3 single circuit structures, and there's an
4 additional portion, some tenths of a mile, maybe
5 3/10ths or 4, where that line is on double circuit
6 structures along with the line to Cooper, the 230
7 line to Cooper. So, it's under two miles. I have
8 used 1.4 in my discussion. It may be a few tenths
9 of a mile more than that.

10 Q. How many miles of existing double circuit
11 structures in Maryland would need to have a second
12 line installed on them under Conceptual Alternative
13 3A?

14 A. I have not committed the number to
15 memory. We're talking about the distance from
16 Conastone as it heads west before the -- the line,
17 and then it starts to head in a northeasterly
18 direction. Maybe seven miles. Most likely less
19 than that, but, again, it would be subject to
20 check. But that's the section of transmission line
21 that we would be talking about, the portion of the

1 Otter Creek-Conastone 230 kV line that's in
2 Maryland. When it enters Maryland, it comes down
3 for several miles, and then it jogs something like
4 3.7 miles or so in an easterly direction before it
5 reaches Conastone.

6 Q. Okay. And the IEC-East project involves
7 the construction of about three miles of new
8 transmission line in Maryland, correct?

9 A. New double circuit transmission line in
10 Maryland, correct.

11 Q. So, as compared to the IEC project,
12 Conceptual Alternative 3A would replace the
13 IEC-East project's three miles of new transmission
14 line with 1.4 or so miles of line that needs to be
15 wrecked and rebuilt and about seven miles or so of
16 line installed on existing towers; is that correct?

17 A. That's correct.

18 Q. All right. Now, I understand that you
19 are continuing to review the cost-benefit analysis
20 that PJM performed with respect to Conceptual
21 Alternative 3A.

1 If you assume that PJM's cost-benefit
2 analysis for Conceptual Alternative 3A was -- is
3 accurate, if the commission decides that it wants
4 to reduce congestion in Maryland and the
5 surrounding region and also resolve the emerging
6 reliability violations that Project 9A would
7 resolve, would you agree that Project 9A is a
8 superior option to Conceptual Alternative 3A?

9 MS. McLEMORE: Do you mean a benefit-cost
10 analysis?

11 MR. GUNDERSON: Yes. What did I say?

12 MS. McLEMORE: Cost benefit.

13 MR. GUNDERSON: Oh.

14 THE WITNESS: I'm sorry, I was wondering
15 whether you had filed work papers that showed all
16 of the cost-benefit stuff as opposed to waiting to
17 respond to discovery.

18 BY MR. GUNDERSON:

19 Q. I'm sorry, what --

20 MR. CURRAN: That was a quip.

21 THE WITNESS: No. I was just curious if

1 you had. One would have thought there were work
2 papers, but anyway. Go ahead. I didn't know what
3 the question is.

4 MR. CURRAN: Yes, I get it now. I get
5 it.

6 BY MR. GUNDERSON:

7 Q. So, the question is, if you had assumed
8 that PJM's cost -- benefit-cost analysis for
9 Conceptual Alternative 3A is accurate, if the
10 commission decides that it wants to reduce
11 congestion in Maryland and the surrounding region
12 and also resolve the emerging reliability
13 violations that Project 9A would resolve, would you
14 agree that Project 9A is a superior option to
15 Conceptual Alternative 3A?

16 MS. McLEMORE: Objection. Form.

17 THE WITNESS: I haven't seen the numbers
18 so I can go over and verify the economic benefits
19 of 3A nor am I going to place myself in the
20 commission's shoes as to how they're going to weigh
21 the benefits of cultural and natural resources.

1 From a pure economics point of view,
2 you've got -- once we see the numbers, we can
3 render an opinion on whether or not what PJM has
4 said is right, but as it stands what they have
5 shown in that particular table, I can agree that
6 Horger's table suggests that Project 9A has
7 superior economic benefits both in terms of the
8 benefits and the costs.

9 BY MR. GUNDERSON:

10 Q. Are you familiar with the fact that the
11 commission has approved a 368 megawatt offshore
12 wind project developed by U.S. Wind to be located
13 off the Delmarva shore?

14 A. I'm only vaguely familiar that this
15 particular project was out there.

16 Q. Okay. Are you also aware that New Jersey
17 has a goal of developing 3,500 megawatts of
18 offshore wind off the New Jersey coast by 2030?

19 A. I'm not aware of that particular goal. I
20 know there's an interest in development, but,
21 again, I'm not aware of that particular goal.

1 Q. Do you agree that there are no
2 transmission lines that lead directly from the
3 Delmarva Peninsula to the mainland portions of
4 Maryland without first going through Pennsylvania?

5 A. Yes.

6 Q. Do you agree that the closest point of
7 connection from the Delmarva Peninsula to the rest
8 of mainland in Maryland is at the Peach Bottom
9 Substation?

10 A. The 500 PATH to get from Delmarva into,
11 for example, BG&E's service territory as we learned
12 from the MAPP project, because it rotated the power
13 flows in that direction, means you have to come
14 Keeney, Rock Springs, Peach Bottom, Conastone.
15 That's the path on the 500 kV system.

16 Q. Okay.

17 A. Obviously, power would be injected in
18 Delmarva and pushed north as well as pushing to the
19 east -- shall we say the west, --

20 Q. Right.

21 A. -- but, yes, that's the mainland route

1 into Maryland.

2 Q. So, any offshore wind that is developed
3 off the Delmarva shore would flow in that
4 direction, correct?

5 A. It wouldn't overload the current
6 transmission system. Probably potentially even
7 with Project 9A. It just depends on power flows.

8 You've got a heavily loaded transmission
9 system in the area of Peach Bottom, so much so that
10 sometimes trying to add generation in New Jersey
11 overloads the system. So, what you're dealing with
12 is a -- is a potential where you're going to have
13 to add more incremental transmission capacity to
14 address generation over there in Delmarva,
15 incremental transmission that would allow more
16 east-to-west transfers into Maryland.

17 Q. So, just to clarify, any offshore wind
18 that's developed off the Delmarva shore
19 would -- that power would need to flow through the
20 Peach Bottom area, correct?

21 A. No. We don't know where the power is

1 going to flow. We just know there's pull, there's
2 sources and sinks. You add a new source out in
3 Delmarva, it's going to find its way to sinks.
4 It's going to change the power flows. There will
5 be more that needs to go north, more that wants to
6 go south on the Delmarva Peninsula, and then more
7 that wants to go, as we're discussing, towards
8 Peach Bottom and then even further on potentially
9 towards Maryland.

10 Q. Okay.

11 A. But it will put more push because it's a
12 new sink.

13 Q. Right. So, in order for any offshore
14 wind that's developed off the Delmarva shore to
15 serve load in central Maryland, you'd agree that
16 that power would need to first flow through the
17 Peach Bottom area?

18 A. It's never going to make it to southern
19 Maryland. Those electrons aren't going to get that
20 far.

21 Q. Under the current topology?

1 A. Even with Project 9A. I mean, for me to
2 try, and without today in a question-answer
3 setting, to get from Delmarva to southern Maryland,
4 for example, SMECO, they can't get past the
5 Baltimore sinks, the Conastone-Graceton sinks.
6 Power flows, you follow?

7 Q. Right.

8 A. They can't get that far. They will be
9 absorbed by a sink before it ever gets to southern
10 Maryland.

11 Q. How about into the BGE zone?

12 A. Yes. Generally, the power is going to
13 flow. The pull is the pull. The sink that you add
14 over in the coast and Delmarva is just more power
15 that's trying to find its way somewhere else.

16 Q. Okay. And do you agree that Project 9A
17 would allow for incremental transmission capacity
18 from southern Pennsylvania into the BGE zone?

19 A. It represents incremental transmission
20 from southern Pennsylvania into the BG&E zone, just
21 like an alternative would do the same.

1 Q. Do you think the addition of offshore
2 wind off the shore -- the Delmarva shore would
3 increase congestion costs in the BGE zone under the
4 current topology?

5 A. I don't know how material it might be.
6 More generation outside the constraint could affect
7 the flows across the constraint without question.
8 I don't think it's going to have a material effect.
9 How many megawatts are you talking about?

10 Q. Well, the first -- the first project is
11 368 megawatts, but then you have New Jersey with a
12 goal of 3,500 off the Jersey shore.

13 A. Here's a thought: With that much
14 generation potential, we may build the Project 9A
15 and decide, Oops, we needed a much bigger project.
16 Maybe we needed a 500 kV into Conastone.

17 I mean, that's the challenge you face
18 with generation; large amounts in different areas.
19 We just got a lot of generation in the Peach Bottom
20 area, and that's problematic for the system.

21 MR. GUNDERSON: We'll take five minutes

1 and see, I may be done or close to done, so.

2 MS. McLEMORE: Okay.

3 (Recess taken -- 3:24 p.m.)

4 (After recess -- 3:29 p.m.)

5 BY MR. GUNDERSON:

6 Q. Do you recall -- going back to the PATH
7 case, the P-A-T-H case. Do you recall whether that
8 project would have resolved reliability issues on
9 the Peach Bottom to Conastone 500 kV line?

10 A. I don't recall if that was one of the
11 drivers.

12 Q. Have you formed an opinion as to whether
13 PJM's forecasts of congestion costs with respect to
14 the AP-South and the AEP-DOM interfaces are
15 accurate?

16 A. I did some work early on in this case
17 where I was looking at the projections of the net
18 benefits of Project 9A in the specific years that
19 PJM would model.

20 So, for example, you'd get 2015 as one
21 observation, 2019 as another observation, and 2025,

1 2029. These numbers jumped depending on the zone.
2 They were volatile.

3 In other words, if one statistically
4 looked at drawing a line through the fourth data
5 point or the fifth data point, if all five were
6 provided, your confidence intervals in the number
7 were very poor. That's the extent to which I've
8 looked at the analysis of effectively congestion
9 costs or projections that find their way into net
10 load payment calculations that PJM provided to me,
11 and I was concerned about the relative ability to
12 claim that those are reasonable numbers given when
13 you only have four observations. Statistically
14 there's not a lot of confidence.

15 Now, if they had trended fairly straight,
16 even with four numbers you get a little bit more
17 comfort, but I was seeing estimates in certain
18 zones where it was the effect of a W on a computer
19 screen, which gave me concern. That's responsive
20 to your question, because whether I've gained
21 confidence in PJM's projections is, in part,

1 related to my concerns about lines being drawn
2 through numbers that seem to be somewhat unstable
3 depending on the year that PJM modeled.

4 Q. Have you reviewed PJM's modeling of
5 congestion costs that it used for -- when it
6 reevaluated Project 9A's benefit-to-cost ratio
7 in -- earlier this year?

8 A. I have not looked at the -- the numbers
9 similar to what was presented in the past in
10 discovery where I could look at each zone year by
11 year for the years that were actually modeled with
12 that data, so, no, I have not.

13 Q. Okay. So, having not looked at that
14 information, I take it you have not formed an
15 opinion as to the accuracy of PJM's modeling of
16 congestion costs that were used to reevaluate
17 Project 9A's benefit-to-cost ratio earlier this
18 year?

19 A. I don't think PJM or Dwight Etheridge
20 could "label" the specific accuracy of their
21 estimates. They are their estimates. It reflects

1 their models, but to the extent that you get an
2 estimate of something that has an increase and then
3 the next time you see a data point it decreases and
4 then increases again, that would cause anybody
5 reviewing the numbers to think as to whether, in
6 fact, these are numbers you want to bet on. That
7 doesn't --

8 Q. Well --

9 A. Again, that doesn't have anything to do
10 with how accurate it is. It's just how much faith
11 you put in the numbers, because PJM can't go back
12 and say, this is how accurate our models were.
13 We've benchmarked them over the years. They
14 haven't done that.

15 Q. Are the increases and decreases that
16 you're speaking of in particular zones, is that
17 contained within a single model for different
18 years?

19 A. Right. So, for example, the original
20 benefit-cost ratio of 2.48, a spreadsheet was
21 provided in discovery, and that spreadsheet

1 indicated that for each zone, here's each of the
2 years PJM modeled. And then there were
3 interpolations between those points and then an
4 extrapolation thereafter based on a simple
5 aggression through, for example, the five data
6 points that were provided.

7 A simple regression through five data
8 points doesn't offer much confidence with regard to
9 the extrapolation simply because your degrees of
10 freedom is so low, but in particular if you looked
11 at those particular regressions, when we got the
12 same data or when I received the same data for
13 September 2017 when the cost -- benefit-cost ratio
14 fell to 1.3, you became even less confident in the
15 numbers.

16 Even though there was a short number of
17 observation points, quite literally the data, you
18 know, would hover up and down around zero, but then
19 you have no confidence whatsoever that that zone is
20 going to produce that benefit. And that was
21 disconcerting early on when I was first starting to

1 look at this case. It's somewhat still
2 disconcerting.

3 Q. Do you agree that congestion in any
4 particular zone can fluctuate from year to year?

5 A. Historical congestion or congestion can
6 fluctuate for a variety of reasons without
7 question. It seems less likely that you would see
8 a great deal of fluctuation in projected
9 congestion, unless possibly PJM is modeling certain
10 outages where you go, A-ha, that element had
11 congestion on it that varied because something of I
12 hadn't thought of, an outage.

13 So, again, historically you can have
14 variations of congestion on any given facility, for
15 weather, for outages, and a variety of factors, and
16 outages on generators, not just transmission lines.
17 So, it's -- it's a difficult thing to predict.
18 It's a difficult thing to infer from historical
19 data as well.

20 Q. Right. So, if historical congestion has
21 a -- fluctuates in any particular zone from year to

1 year, you would expect that projections of
2 congestion in that zone would also fluctuate from
3 year to year?

4 A. That's what I just don't understand how
5 they necessarily would. Obviously, projected
6 congestion reflects the inputs and the assumptions
7 regarding the inputs. A new transmission line
8 coming on line would cause a change in congestion
9 potentially on nearby facilities.

10 So, if the upward trend was growth,
11 upward trend in congestion, something might cause
12 it to come down, and then it would start up again.
13 But, again, it's difficult to gain any transparent
14 view in PJM's models, in part, because these are
15 large models with lots of inputs to try and
16 decipher, well, why is it that congestion tends to
17 be volatile from any given year that's modeled?

18 Q. Have you asked any discovery of PJM to
19 answer that question?

20 A. I haven't looked back at that particular
21 issue for many months.

1 MR. GUNDERSON: All right. I think we
2 are finished. No further questions. Thank you.

3 THE WITNESS: Thank you.

4 MS. MCLEMORE: We need to look at it
5 first.

6 (Recess taken -- 3:38 p.m.)

7 (After recess -- 3:46 p.m.)

8 EXAMINATION

9 BY MR. RAYKHER:

10 Q. Mr. Etheridge, thanks for your -- your
11 time today. I wanted to just redirect you back
12 briefly and ask if you recalled this morning when
13 Counsel for Transource asked you about the Office
14 of People's Counsel's witness Douglas A. Smith's
15 direct testimony filed in this matter?

16 A. I do recall that, yes.

17 Q. And specifically do you recall when
18 Counsel for Transource asked you about the specific
19 items that you disagreed with -- with in
20 Mr. Smith's testimony?

21 A. Yes.

1 Q. And could I ask you, are there areas of
2 Mr. Smith's testimony that you are in agreement
3 with?

4 A. Yes.

5 Q. Could you summarize those areas?

6 A. I can't. I would have to go through the
7 entire document again.

8 Q. Okay. So, that's -- that's fair. Let us
9 just take a quick look, if you still have a copy of
10 the testimony with you.

11 A. I do.

12 Q. I'll just direct you to two -- two
13 sections, and we'll go through those very briefly.

14 On pages 3 and 4, you had briefly
15 discussed those pages with Counsel for Transource.
16 Pages 3 and 4 specifically list Mr. Smith's
17 conclusions and recommendations.

18 A. Okay. I am on pages 3 and 4 of
19 Mr. Smith's testimony.

20 Q. Okay. Perfect. If you could tell me on
21 page -- starting with the line 6 there and going

1 through the specific conclusions and
2 recommendations of those which ones you're in
3 agreement with?

4 A. I agree with the statement on 9, lines 9
5 and 10. I agree with the statement on lines 11 and
6 13.

7 I believe I had problems with the
8 testimony on lines 14 and 19 in that I didn't
9 disagree with certain aspects of it, which is not
10 responsive to the question. But, nonetheless, to
11 the extent in 14 and 19 that I didn't have a
12 disagreement with that testimony, then I guess I
13 agreed with that testimony without going back to
14 the transcripts of what I said earlier today.

15 Q. Okay. And those are lines 14 through 19?

16 A. Right.

17 Q. Okay. And then 20 through 1 and 2
18 on page 4 -- 20 and 21 on page 3 and 2 on page
19 4?

20 A. The potential for additional market
21 response would increase the uncertainty of expected

1 future benefits, that's on line 20 and 21.
2 Obviously, if the market response was in the right
3 location, which is not clarified necessarily here.
4 Falling congestion deals with history.

5 What's relevant is the projections, and
6 as far as just the element of risk on line -- or
7 page 4, lines 1 and 2, the risk is with Maryland
8 ratepayers.

9 Q. So, just to clarify, there's an agreement
10 with lines 1 and 2 on page 4, and is there an
11 agreement with lines 20 and 21 on page 3?

12 A. As regards to additional market response,
13 yes.

14 Q. Did that complete your answer?

15 A. Yes.

16 Q. Turning to page 4, the question that goes
17 from lines 3 and 4, and then there's an answer
18 going from 5 -- lines 5 to 19.

19 A. Yes.

20 Q. Can you similarly note your -- whether
21 you agree with the conclusions and recommendations

1 noted there?

2 A. Yes. One moment.

3 Q. Of course. Thank you.

4 (Whereupon, there was a pause for
5 document examination.)

6 THE WITNESS: I agree with what's stated
7 on lines 5 and 6.

8 (Whereupon, there was a pause for
9 document examination.)

10 THE WITNESS: As regards to 6 and 8, I do
11 believe I previously discussed today that PJM's
12 process does provide estimates of benefits for
13 transmission zones. Those benefits would allow
14 parties to make calculations. As to the benefits
15 for the state of Maryland, that they could present
16 to the Maryland Commission.

17 BY MR. RAYKHER:

18 Q. And then the sentence starting,
19 Additionally, on line 8 through 10?

20 A. I clearly believe there's at least one
21 alternative that would allow the use of existing

1 right of way that is potentially feasible.

2 Q. Then moving on to the sentence that
3 starts with, I recommend, lines -- running lines 11
4 through 14?

5 A. My testimony differs somewhat in terms of
6 this testimony. On lines 11 to 14, I'm talking
7 about in my testimony the elusive nature of
8 benefits.

9 This testimony talks about finding that a
10 calculation based on an approximation indicates an
11 unreasonably high risk, and I haven't made such an
12 analysis, yea or nay, if I could support this or
13 not. I just took a different approach.

14 But clearly to the extent I've testified
15 that the benefits are elusive and volatile, that
16 creates in the eyes of a decision-maker risk.

17 Q. I think you have already made comments
18 about the sentence starting with, Finally, I
19 recommend, running 14 to 16 -- I believe this
20 morning you've been asked about the sentence
21 starting with, Finally, running lines 14 through

1 16, but if you could take a look at that sentence
2 as -- as well and note whether you agree.

3 A. Yes, I don't necessarily agree that the
4 congestion over the last couple years indicates a
5 decline in the relevant congestion that's at issue
6 in this case. I agree -- yes, I agree with what's
7 written on lines 17 through 19.

8 Q. Okay.

9 MR. RAYKHER: So, that concludes my line
10 of questioning. So, as I've said, very short, and
11 I appreciate your responses, especially given the
12 many questions you were asked today. So, thank
13 you.

14 THE WITNESS: You're welcome.

15 MR. GUNDERSON: Mr. Etheridge, I have a
16 short follow-up to make a clarification.

17 REEXAMINATION

18 BY MR. GUNDERSON:

19 Q. On page 3 of Mr. Smith's direct
20 testimony, lines 20 to 21, can you -- just to
21 clarify, do you agree that the market response

1 would be dependent on the location of any
2 generation facilities -- I'm sorry, the ability of
3 the market response to resolve or reduce congestion
4 related to the congestion that Project 9A is
5 projected to resolve, is the location of that
6 generation important?

7 A. It is, but it's important to expand that
8 my answer a moment ago in terms of market response
9 was market response beyond generation.

10 Q. Okay.

11 A. It was also demand response. So, to the
12 extent that market participants are reacting to
13 price signals, as we've discussed earlier today, in
14 terms of addressing congestion, it's important. As
15 you and I, it's the receiving end.

16 Q. Right. Okay. The generation, any demand
17 response, reductions, demand reductions -- I'm
18 sorry, load reductions would need to occur on the
19 receiving end of the congestion constraint,
20 correct?

21 A. To help relieve -- alleviate that

1 congestion or reduce that congestion; correct.

2 Q. Okay.

3 A. Just as you could have generation on the
4 other side of the constraint that, you know, could
5 contribute to pushing power flows around, --

6 Q. Right.

7 A. -- so it is dynamic.

8 Q. Right. And does the amount of the market
9 response play into that as well?

10 A. Amount can be numbers or megawatts.
11 We're talking megawatts. It's not just, you know,
12 five generators. It's how much and where, but it's
13 certainly the magnitude of generation that would be
14 important.

15 Q. Yes. Magnitude is a better word. Thank
16 you. And with respect to generation, does the type
17 of generation matter?

18 A. A different generation on the receiving
19 side of the constraint would affect the number of
20 hours that there is congestion. To the extent
21 you're modeling capacity in terms of what it might

1 produce for reliability benefits, the generation on
2 the receiving side, that might be solar, will
3 already be reduced in its capacity value to equate
4 to, for example, a combined cycle plant because
5 you're talking about magnitude.

6 In that case, there wouldn't be any
7 difference, because the capacity has already made
8 apples to apples, but in terms of energy, your
9 combined cycle plant, depending on the fact that
10 it's going to be operating more often, but that's
11 only how PJM is going to model gas prices and such,
12 would be reducing congestion more because it's on
13 more hours of the year necessarily than PJM would
14 be modeling an intermittent resource from an energy
15 perspective.

16 Q. All right. Thank you.

17 MR. GUNDERSON: Assuming nobody else is
18 going to pipe up with some last-minute questions on
19 the phone, I think we're finished, and we'll hang
20 up for now.

21 MR. RAYKHER: Okay. I'm here.

1 MR. GUNDERSON: Thank you.

2 (Whereupon, the deposition of Dwight D.
3 Etheridge was concluded at 4:01 p.m., and the
4 reading and signing of the transcript was not
5 waived.)

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1 Transource Maryland, LLC

2 Dwight A. Etheridge

3 INSTRUCTIONS TO THE WITNESS

4 Please read your deposition over
5 carefully and make any necessary corrections. You
6 should state the reason in the appropriate space on
7 the errata sheet for any corrections that are made.

8 After doing so, please sign the errata
9 sheet and date it.

10 You are signing same subject to the
11 changes you have noted on the errata sheet, what
12 will be attached to the deposition.

13 It is imperative that you return the
14 original errata sheet to the deposing attorney
15 thirty (30) days of receipt of the deposition
16 transcript by you. If you fail to do so, the
17 deposition transcript may be deemed to be accurate
18 and may be used in court.

19

20

21 Job #3304746

Transource Maryland, LLC

Dwight A. Etheridge

ERRATA

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Job #3304746

1 Transource Maryland, LLC

2 Dwight A. Etheridge

3 ACKNOWLEDGMENT OF DEPONENT

4 I, DWIGHT A. ETHERIDGE, do hereby certify
5 that I have read the foregoing pages and that the
6 same is a correct transcription of the answers
7 given by me to the questions therein propounded,
8 except for the corrections or changes in form or
9 substance, if any, noted in the attached errata
10 sheet.

11 _____
12 DATE

11 _____
12 SIGNATURE

1 State of Maryland

2 County of Baltimore, to wit:

3 I, Michele D. Lambie, a Notary Public of
4 the State of Maryland, County of Baltimore, do
5 hereby certify that the within-named witness
6 personally appeared before me at the time and place
7 herein set out, and after having been duly sworn by
8 me, according to law, was examined by counsel.

9 I further certify that the examination
10 was recorded stenographically by me and this
11 transcript is a true record of the proceedings.

12 I further certify that I am not of
13 counsel to any of the parties, nor related to any
14 of the parties, nor in any way interested in the
15 outcome of this action.

16 As witness my hand this 21st day of May, 2019.

17

18

19

20

21 My Commission Expires: April 29, 2020

& & 20:15 1 1 2:18 5:9 23:17 32:14,18 44:21 58:6 65:9 101:14 185:9 216:17 217:7,10 1.25 59:20 159:15 1.3 143:11 197:2 211:14 1.30. 143:3 1.4 196:17 197:8 198:14 10 56:14 180:10 216:5 218:19 10:06 52:11 10:15 52:12 11 31:3 54:9 57:8 59:10 63:10,13 64:20 66:4 67:1 216:5 219:3,6 115 99:4 11:49 100:18 11:53 100:19 12 59:8 67:10,17 67:21 68:10 12:28 127:8 13 59:9 62:2 216:6 14 53:18 58:11 69:3,10,18 178:8 182:11,20 195:5 216:8,11,15 219:4 219:6,19,21 15 26:13,14,14 27:3 58:17 59:14 60:12 69:14,18 178:8,21 181:2 182:11,20 186:17 195:5 16 1:14 49:17 53:18 219:19 220:1	161 5:13 17 37:4 59:17 64:13 69:10 70:3 70:19 220:7 17,061 19:3 17th 4:6 18 70:3 182:4 180 5:14 1800 3:11 19 49:17 66:4 67:1 67:21 69:19 180:17 181:3,3,15 182:4,4 216:8,11 216:15 217:18 220:7 1999 11:7 1:00 34:6,6 1:23 127:9 2 2 5:10 48:10,16,18 49:7 62:2 69:14 99:21 101:15,21 141:15 142:1 185:7,9 216:17,18 217:7,10 2,000 19:4 2.17 143:19 159:21 160:5 2.48 143:7 144:2 210:20 2.48. 143:1 20 50:20 62:8 67:2 69:10 70:15,15 76:5 216:17,18 217:1,11 220:20 2000 117:3 2006 41:20 2008 41:15 2014 50:9 51:14 57:8,14 115:3,19 178:21 181:2 186:17 2014/2015 68:20 165:7	2015 117:11 207:20 2015/2016 117:11 2016 115:11 116:3 141:1 142:21 178:1 179:17 180:10,14 181:18 2016/2017 134:18 2017 37:5 143:2 165:4 167:14 211:13 2018 37:3,8,20 50:12 99:1 2019 1:14 160:17 207:21 228:16 2020 228:21 2023 65:19 132:9 2025 207:21 2029 208:1 2030 201:18 21 62:3,9 67:2 181:9,15,15,20 216:18 217:1,11 220:20 2102 3:19 21202 2:12 3:20 4:7 21230 3:12 214 5:3 21st 228:16 22 67:21 70:18 163:4 220 5:4 23 66:5 67:1 69:14 70:21 230 1:6 103:4,8,10 103:11 118:12 121:20 122:18,18 122:20 123:6,7,8 123:12,19 124:5 135:2 167:3 193:4 194:1 197:6 198:1 24 68:10,15 69:2	244-7819 2:13 25 68:16 26 68:11,16 69:2 2743 128:12 2752 128:14 29 228:21 2:45 187:2,4 2:56 187:5 2a 142:5 185:6 3 3 5:11 49:2,7 52:15 56:14 61:11 61:15,17 62:3,19 63:4,12,13 65:9 67:10,11 69:3 99:21 101:20 102:3 185:9 215:14,16,18 216:18 217:11,17 220:19 3,500 201:17 206:12 3.7 198:4 3/10ths 197:5 30 225:15 300 22:14,15 32 5:9 57:7 33 147:6 3304746 225:21 226:21 345 20:6,6 345s 19:21 36 146:21 147:17 368 201:11 206:11 3:24 207:3 3:29 207:4 3:38 214:6 3:46 214:7 3a 58:2 99:19 100:2 102:3,3 137:10,16 165:14 165:17 166:5 185:3,14 186:2,10 186:11 195:5,11
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Maryland Rules of Procedure
Title 2, Chapter 400, Rule 2-415

(D) Signature and Changes

Unless changes and signing are waived by the deponent and the parties, the officer shall submit the transcript to the deponent, accompanied by a notice in substantially the following form:

[Caption of case], NOTICE TO [name of deponent].
The enclosed transcript of your deposition in the above-captioned case is submitted to you on [date of submission of the transcript to the deponent] for your signature and any corrections or other changes you wish to make. All corrections and other changes will become part of your sworn testimony. After you have read the transcript, sign it and, if you are making changes, attach to the transcript a separate correction sheet stating the changes and the reason why each change is being made. Return the signed transcript and any correction sheet to [name and address of officer before whom the deposition was taken] no later than 30 days after the date stated above. If you fail to return the signed transcript and any correction sheet within the time allowed, the transcript may be used

As if signed by you. See Rules 2-415 and 2-501 of the Maryland Rules of Procedure.

Within 30 days after the date the officer mails or otherwise submits the transcript to the Deponent, the deponent shall (1) sign the transcript and (2) note any changes to the form or substance of the testimony in the transcript on a separate correction sheet, stating the reason why each change is being made. The officer promptly shall serve a copy of the correction sheet on the parties and attach the correction sheet to the transcript. The changes contained on the correction sheet become part of the transcript. If the deponent does not timely sign the transcript, the officer shall sign the transcript, certifying the date that the transcript was submitted to the deponent with the notice required by this section and that the transcript was not signed and returned within the time allowed. The transcript may then be used as if signed by the deponent, unless the court finds, on a motion to suppress under section (i) (j) of this Rule, that the reason for the failure to sign requires rejection of all or part of the transcript.

(I) Further Deposition Upon Substantive Changes to Transcript

If a correction sheet contains substantive changes, any party may serve notice of a further deposition of the deponent limited to the subject matter of the substantive changes made by the deponent unless the court, on motion of a party pursuant to Rule 2-403, enters a protective order precluding the further deposition.

DISCLAIMER: THE FOREGOING CIVIL PROCEDURE RULES ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY. THE ABOVE RULES ARE CURRENT AS OF APRIL 1, 2019. PLEASE REFER TO THE APPLICABLE STATE RULES OF CIVIL PROCEDURE FOR UP-TO-DATE INFORMATION.

VERITEXT LEGAL SOLUTIONS
COMPANY CERTIFICATE AND DISCLOSURE STATEMENT

Veritext Legal Solutions represents that the foregoing transcript is a true, correct and complete transcript of the colloquies, questions and answers as submitted by the court reporter. Veritext Legal Solutions further represents that the attached exhibits, if any, are true, correct and complete documents as submitted by the court reporter and/or attorneys in relation to this deposition and that the documents were processed in accordance with our litigation support and production standards.

Veritext Legal Solutions is committed to maintaining the confidentiality of client and witness information, in accordance with the regulations promulgated under the Health Insurance Portability and Accountability Act (HIPAA), as amended with respect to protected health information and the Gramm-Leach-Bliley Act, as amended, with respect to Personally Identifiable Information (PII). Physical transcripts and exhibits are managed under strict facility and personnel access controls. Electronic files of documents are stored in encrypted form and are transmitted in an encrypted fashion to authenticated parties who are permitted to access the material. Our data is hosted in a Tier 4 SSAE 16 certified facility.

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1 Transource Maryland, LLC

2 Dwight A. Etheridge

3 ACKNOWLEDGMENT OF DEPONENT

4 I, DWIGHT A. ETHERIDGE, do hereby certify
5 that I have read the foregoing pages and that the
6 same is a correct transcription of the answers
7 given by me to the questions therein propounded,
8 except for the corrections or changes in form or
9 substance, if any, noted in the attached errata
10 sheet.

11 6/19/19

12 DATE

Dwight D. Etheridge

13 SIGNATURE

Attachment A

Corrections and Changes to the Transcript of the Deposition of Dwight D. Etheridge

<u>Page:Line</u>	<u>Change / Reason</u>
1:13	Mr. Etheridge's middle initial should be "D". Reason: typographical.
13:16	"market, the" should be replaced with "market? The". Reason: typographical.
16:11	"of one" should be replaced with "of being one". Reason: typographical.
16:16	"sighting" should be replaced with "siting". Reason: typographical.
17:19	"needed an incremental" should be replaced with "needed incremental". Reason: typographical.
19:3	"17, 061 kV" should be replaced with "17, 161 kV". Reason: typographical.
19:5	"megawatts load" should be replaced with "megawatts of load". Reason: typographical.
19:11	"Electrical" should be replaced with "Electric". Reason: typographical.
20:6	"with four lines, a 345" should be replaced with "with four lines, at 345". Reason: typographical.
20:18	"SC&G" should be replaced with "SCE&G". Reason: typographical.
21:3	"negotiations with utility" should be replaced with "negotiations with the utility". Reason: typographical.
21:8	"SC&G" should be replaced with "SCE&G". Reason: typographical.
22:4	"Lab in" should be replaced with "Lab, in". Reason: typographical.
22:10	"work" should be replaced with "worked". Reason: typographical.

**Corrections and Changes to the Transcript of the Deposition of Dwight D. Etheridge
(cont'd)**

- 25:1 “at electricity” should be replaced with “ at an electricity”.
Reason: typographical.
- 26:11 “seeking offers of” should be replaced with “seeking offers at”.
Reason: substantive change to accurately reflect that offers were for power delivered “at” the California-Oregon border.
- 26:13-14 “MP” should be replaced with “NP”.
Reason: typographical.
- 27:3 “MP” should be replaced with “NP”.
Reason: typographical.
- 27:5 “.” Should be replaced with “?”.
Reason: typographical.
- 31:1 “transmissioning” should be replaced with “transmission”.
Reason: typographical.
- 33:8 “staff” should be replaced with “Staff”.
Reason: typographical.
- 38:21-39:21 “potential lead” should be replaced with “potential to”.
Reason: typographical.
- 51:17 “our discussion congestion” should be replaced with “our discussion of congestion”.
Reason: typographical.
- 57:8 “is suggestion” should be replaced with “is a suggestion”.
Reason: typographical.
- 59:1 “market participant’s” should be replaced with “a market participant’s”.
Reason: typographical.
- 62:9 “page” should be replaced with “line”.
Reason: substantive change for accuracy.
- 62:16 “interface geographically” should be replaced with “interface is geographically”.
Reason: typographical.
- 63:1 “liability” should be replaced with “reliability”.
Reason: typographical.
- 69:9 “answer? No” should be replaced with “answer no”.
Reason: typographical.

**Corrections and Changes to the Transcript of the Deposition of Dwight D. Etheridge
(cont'd)**

- 70:5 “before was” should be replaced with “before FERC was”.
Reason: typographical.
- 72:19-20 “reduction load payments” should be replaced with “reduction in load payments”.
Reason: typographical.
- 87:21 “efficiency project to value” should be replaced with “efficiency project’s value”.
Reason: typographical.
- 102:14 “propriety” should be replaced with “proprietary”.
Reason: typographical.
- 103:13 “In addition in” should be replaced with “In addition, in”.
Reason: typographical.
- 103:16 “TX” should be replaced with “TEAC”.
Reason: typographical.
- 104:15 “TX” should be replaced with “TEAC”.
Reason: typographical.
- 106:11 “deny CPCN” should be replaced with “deny a CPCN”.
Reason: typographical.
- 110:7 “of Five Forks” should be replaced with “or Five Forks”.
Reason: typographical.
- 112:1 “and FERC-sized” should be replaced with “in FERC’s eyes”.
Reason: typographical.
- 114:15 “in addition” should be replaced with “in addition to”.
Reason: typographical.
- 116:7 “that at” should be replaced with “that in”.
Reason: typographical.
- 116:16 “prove” should be replaced with “approve”.
Reason: typographical.
- 117:3 “2000” should be replaced with “2016”.
Reason: substantive change for accuracy.
- 120:14 “liability” should be replaced with “reliability”.
Reason: typographical.
- 126:14 “hypothetical” should be replaced with “hypothetically”.

**Corrections and Changes to the Transcript of the Deposition of Dwight D. Etheridge
(cont'd)**

	Reason: typographical.
128:12	“in” should be replaced with “and”.
	Reason: typographical.
129:20	“would come down, BGE customers. Not their total” should be replaced with “would come down. BGE customers—not their total”.
	Reason: typographical.
130:11	“the benefits reduced” should be replaced with “the benefits—reduced”.
	Reason: typographical.
135:8	“interconnector” should be replaced with “interconnected”.
	Reason: typographical.
135:17-18	“linkage that project shifted that congestion that”” should be replaced with “linkage, that project shifted that congestion, that”.
	Reason: typographical.
138:15	“solutions” should be replaced with “solution”.
	Reason: typographical.
141:7	“revolve” should be replaced with “resolve”.
	Reason: typographical.
143:21	“it’s” should be replaced with “it”.
	Reason: typographical.
145:19	“approve” should be replaced with “improve”.
	Reason: typographical.
147:17	“change” should be replaced with “chance”.
	Reason: typographical.
148:18	“cited” should be replaced with “sited”.
	Reason: typographical.
154:6	“generations” should be replaced with “generation”.
	Reason: typographical.
154:7	“eye” should be replaced with “end”.
	Reason: typographical.
154:9	“any more” should be replaced with “anymore”.
	Reason: typographical.
155:10	“?” should be replaced with “.”.
	Reason: typographical.

**Corrections and Changes to the Transcript of the Deposition of Dwight D. Etheridge
(cont'd)**

- 158:13 “reliability and criteria” should be replaced with “reliability criteria”.
Reason: typographical.
- 162:10 “Exhibit A1” should be replaced with “Appendix A”.
Reason: typographical.
- 164:3 “then” should be replaced with “them”.
Reason: typographical.
- 167:8 “how” should be replaced with “out of”.
Reason: typographical.
- 168:10 “spoke” should be replaced with “spoken”.
Reason: typographical.
- 175:10 “transfers of” should be replaced with “Transource a”.
Reason: typographical.
- 176:12-13 “reliability market ” should be replaced with “reliability and market”.
Reason: typographical.
- 177:13 “persistent reduction in persistent congestion ” should be replaced with
“reduction in persistent congestion”.
Reason: typographical.
- 178:1 “end in” should be replaced with “end, in”.
Reason: typographical.
- 178:14 “Adam” should be replaced with “Atom”.
Reason: typographical.
- 178:15 “substation into” should be replaced with “substation, into”.
Reason: typographical.
- 182:13 “any more” should be replaced with “anymore”.
Reason: typographical.
- 189:10 “all together” should be replaced with “altogether”.
Reason: typographical.
- 189:21 “.” should be replaced with “?”.
Reason: typographical.
- 190:5-6 “High Line” should be replaced with “Highline”.
Reason: typographical.
- 190:10 “Emos” should be replaced with “Amos”.

**Corrections and Changes to the Transcript of the Deposition of Dwight D. Etheridge
(cont'd)**

- Reason: typographical.
- 190:13 “Camptown” should be replaced with “Kemptown”.
- Reason: typographical.
- 191:5 “congestion reliability” should be replaced with “congestion, reliability”.
- Reason: typographical.
- 204:12 “sink” should be replaced with “source”.
- Reason: substantive; provides consistency with the previous testimony at 204:2-3 (“source”).
- 205:2 “without today” should be replaced with “without, today”.
- Reason: typographical.
- 205:13 “sink” should be replaced with “source”.
- Reason: substantive; provides consistency with the previous testimony at 204:2-3 (“source”).
- 211:5 “aggression” should be replaced with “regression”.
- Reason: typographical.
- 212:11 “something of” should be replaced with “of something”.
- Reason: typographical.
- 213:4 “understand how” should be replaced with “understand, how”.
- Reason: typographical.
- 214:19 “with in” should be replaced with “within”.
- Reason: typographical.
- 216:2 “recommendations of” should be replaced with “recommendations, of”.
- Reason: typographical.
- 218:14 “calculations. As” should be replaced with “calculations, as”.
- Reason: typographical.
- 219:16 “creates in the eyes of a decision-maker risk” should be replaced with “creates, in the eyes of a decision-maker, risk”.
- Reason: typographical.
- 223:7. “has” should be replaced with “was”.
- Reason: typographical.
- 225:2. “A” should be replaced with “D”.
- Reason: typographical.
- 226:2. “A” should be replaced with “D”.

**Corrections and Changes to the Transcript of the Deposition of Dwight D. Etheridge
(cont'd)**

Reason: typographical.

227:2. “A” should be replaced with “D”.

Reason: typographical.

227:4. “A” should be replaced with “D”.