

**Thompson, Pamela J.**

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## Filing Accepted

Envelope Number: 6287298

Case Number: 08-2025-CV-02068

Case Style: Wano Township, et al. vs. North Dakota Public Service Commission, et al.



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<b>Case Number</b>	08-2025-CV-02068
<b>Case Style</b>	Wano Township, et al. vs. North Dakota Public Service Commission, et al.
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STATE OF NORTH DAKOTA  
PUBLIC SERVICE COMMISSION

Otter Tail Power Company/Montana-Dakota  
Utilities Co. 345kV Transmission Line -  
Jamestown to Ellendale  
Public Convenience & Necessity

Case No.  
PU-24-91

**TRANSCRIPT OF WORK SESSION**

**August 19, 2024**

APPEARANCES

Commissioners Sheri Haugen-Hoffart, Randy Christmann, and  
Julie Fedorchak

PUBLIC SERVICE COMMISSION:

Brian Johnson, Christopher Hanson, Adam Renfandt,  
Victor Schock, John Schuh

1           COMMISSIONER CHRISTMANN: Okay. This is a work  
2 session of the North Dakota Public Service Commission on  
3 the Otter Tail and MDU Jamestown to Ellendale 345 kV  
4 transmission line. It's August 19th, 2024. It's Case  
5 No. PU-24-91.

6           I don't have any anything else before turning  
7 over to the portfolio holder.

8           Commissioner Fedorchak, do you?

9           COMMISSIONER FEDORCHAK: No, I don't.

10          COMMISSIONER CHRISTMANN: Okay. It's all yours,  
11 Commissioner Haugen-Hoffart.

12          COMMISSIONER HAUGEN-HOFFART: Well, thank you.

13          I guess going back to our commission meeting  
14 last week, I proposed an order and we got into some  
15 discussion. And so I think there's those discussion  
16 items that we need to go through. And I'm just going to  
17 say I'm -- I'm going to give -- just may -- my question,  
18 or lay it out and Randy and Julie and staff can answer  
19 this.

20          You know, looking at that Jamestown to Ellendale  
21 line, we've identified there's some congestions that we  
22 can -- need to get -- being an exporter, get things out.  
23 So when I look at MISO and studying Tranche 1, this is  
24 an area that was identified there would be benefits on  
25 building this 345 kV line.

1           So my first question is, if it's been identified  
2   in the Tranche 1, can we quantify those benefits for MDU  
3   and Otter Tail to look at it? That's my first question.  
4   Has that been -- I guess I assumed, and I shouldn't do  
5   that, that that was studied so we -- can we get some  
6   quantification numbers on that, the benefit of that  
7   line? So that's my first question. And I guess if we  
8   can get that, then that might lead to some more  
9   discussion.

10           So I don't know. I'm going to look to Adam and  
11   Chris or Julie to maybe give me some history there on  
12   that, based on the two years that I've been on the  
13   Commission in that area, that that was -- has been  
14   identified. And I thought MISO maybe did a good job on  
15   identifying that. And this is the one, the only project  
16   in Tranche 1 that North Dakota has what I would say is  
17   maybe benefit. So I'll give that to --

18           ADAM RENFANDT: So I've got a couple handouts  
19   here that might help guide the conversation here.

20           COMMISSIONER HAUGEN-HOFFART: Thanks, Adam.

21           ADAM RENFANDT: I think I put this in the wrong  
22   order. I got a couple -- I only have two more. I've  
23   got this one here. Okay, yeah. There. I think it's in  
24   that order then.

25           So we're here to kind of discuss the Jamestown

1 to Ellendale 345 kV line that was part of MISO's Tranche  
2 1. I believe it was passed by the MISO board of  
3 directors in June of 2022.

4 So the first page you see, it is an overview.  
5 When we think of LRTP projects, we kind of have to think  
6 of them more in a portfolio approach. And in this  
7 particular line, it happens to have been studied and  
8 paired well with not just the single line, which is the  
9 Jamestown to Ellendale line, but also the Big Stone  
10 South to Alexandria to Cass-- Cassie's Crossing.

11 When it comes down to the benefits, there are  
12 benefits in terms of figuring out what kind of  
13 reliability benefits there are. And in this case you'll  
14 see that this is from a MISO presentation that indicates  
15 that the Jamestown to Ellendale line as well as in  
16 combination with the Big Stone South to Cassie's  
17 Crossing relieves 40 elements with excess loadings for  
18 the first transmission element loss or the N-1 and some  
19 of the elements with excess of loading for the second  
20 transmission element.

21 When MISO first started going through their  
22 analysis, they looked at several alternatives. They  
23 focused a lot on six of them. They look at largely --  
24 largely what kind of effect in terms of loadings it will  
25 have, and it will compare to see if, okay, if it can

1 identify a mini portfolio project, if you will, that  
2 relieves the most. And they also tend to look somewhat  
3 at the cost of those lines, but really it's a  
4 reliability analysis. And they also then perform an  
5 economic analysis on it as well.

6 So kind of getting back to the question on the  
7 benefits that this provides, this first page shows, for  
8 Zone 1 through 7, as we are in -- we are located in Zone  
9 1, so that would be to the yellow, to the right of that  
10 chart.

11 Now this is the most conservative, what you call  
12 cost-benefit analysis. So the entire portfolio was --  
13 cost \$10.3 billion. And then they figure out, okay,  
14 well, what kind of benefits can we attach to it such  
15 that the benefit-cost ratio is 1.0 or greater. So per  
16 the tariff, that's the hurdle that we're looking at.

17 And what do I mean by "the most conservative  
18 one" is that they also show this for a 40-year present  
19 value for benefits as well as they increase the value of  
20 loss load that they give their other metrics to  
21 something that is probably a bit unrealistic.

22 So I think when people talk about and when you  
23 hear numbers reported, they're mainly talking -- they're  
24 talking about these numbers, which is the most  
25 conservative of them.

1           So you can see that we're in Zone 1. So the  
2     minimum is 2.8. And then that's where the max comes in.  
3     So we've always tended -- tend to focus on the minimum  
4     benefits that we can achieve.

5           And if we then go and look at the second page --

6           COMMISSIONER FEDORCHAK: And just to clarify,  
7     this is for the whole -- the whole portfolio, not just  
8     this line?

9           ADAM RENFANDT: Right. Yeah.

10          COMMISSIONER FEDORCHAK: Not just the two lines,  
11     it's the whole --

12          ADAM RENFANDT: Yeah.

13          COMMISSIONER FEDORCHAK: -- all of Tranche 1?

14          ADAM RENFANDT: And we have asked before to --  
15     for them to break it down further and more granularly.  
16     Yeah, that's maybe something that we're working on, but  
17     these benefit metrics and BC cost ratios are for the  
18     entire \$10.3 billion. Because they're all supposed to  
19     work together in one portfolio to deliver value.

20          So if we take a look at the --

21          COMMISSIONER FEDORCHAK: One more quick question  
22     on that one, Adam. The inset over there on the right,  
23     is that North Dakota resource additions by 2039?

24          ADAM RENFANDT: Yes, they are.

25          COMMISSIONER FEDORCHAK: So can you talk about



1       this -- assumptions that drove that?

2               ADAM RENFANDT:   Okay.   So the assumptions that  
3       drive that is that starting off in the future's process  
4       when we first start taking a look at where to place  
5       these lines, we have to take a look at, okay, we have to  
6       meet certain IRPs, right?   We have to meet our IRP  
7       goals.

8               COMMISSIONER FEDORCHAK:   And "we" meaning MISO?  
9       MISO.

10              ADAM RENFANDT:   MISO.   MISO.

11              COMMISSIONER FEDORCHAK:   Not we.

12              ADAM RENFANDT:   Yeah, yeah, we.   Yes.

13              COMMISSIONER FEDORCHAK:   MISO says?

14              ADAM RENFANDT:   Yeah.

15              COMMISSIONER FEDORCHAK:   Yeah.

16              ADAM RENFANDT:   So MISO will collect every  
17       utilities' IRPs and they'll take that and say, okay, we  
18       need to -- you know, we need to achieve that.

19              And then they also will meet a certain amount of  
20       goals that are not -- that aren't just goals.   They're  
21       just -- you know, kind of wishes, if you will, that  
22       aren't -- that aren't mandated by the legislature, for  
23       instance.

24              COMMISSIONER HAUGEN-HOFFART:   So give me an  
25       example of a goal that we might bring forward.

1 ADAM RENFANDT: If it was --

2 COMMISSIONER FEDORCHAK: That's the -- not us  
3 really. We don't have these.

4 ADAM RENFANDT: Yeah.

5 COMMISSIONER FEDORCHAK: It's other states that  
6 have their goals and they'll do a certain percentage of  
7 them.

8 ADAM RENFANDT: Yep. Right.

9 COMMISSIONER CHRISTMANN: We have a goal but  
10 it's long been exceeded --

11 COMMISSIONER FEDORCHAK: Well, these are more  
12 like state -- the IRPs are what the companies are  
13 planning, right? So they assume that's going to happen,  
14 because the companies are planning for those at least.  
15 They work to build a system that is going to meet the  
16 needs of their members, which are the investor -- the  
17 people with the IRPs.

18 ADAM RENFANDT: Uh-huh.

19 COMMISSIONER FEDORCHAK: And then they'll meet  
20 the -- then they'll build a system to reach a certain  
21 percentage of, say, Minnesota's renewable mandates or  
22 Wisconsin's or whatever. That -- that's the other --

23 ADAM RENFANDT: Yep, right.

24 COMMISSIONER FEDORCHAK: -- piece component.

25 ADAM RENFANDT: Yeah. And in this component --

1 COMMISSIONER FEDORCHAK: Of the futures.

2 ADAM RENFANDT: Of the futures.

3 COMMISSIONER FEDORCHAK: These are the  
4 futures --

5 ADAM RENFANDT: Yeah, yeah. And that's  
6 another --

7 COMMISSIONER FEDORCHAK: -- that help to  
8 (indiscernible) how -- and they're not like, you know,  
9 meeting like a hundred percent of any future. They're  
10 just used as the guidelines to begin to imagine what  
11 kind of system we're going to need. Because nobody  
12 really knows, but these are the things that direct and  
13 guide what this future system they think is going to  
14 need based on what people are putting in their plans.

15 ADAM RENFANDT: And that's an important point  
16 because we're looking at the year 2039. And by 2039, in  
17 this particular case of what -- what all of this benefit  
18 metrics is based upon is that you meet 100 percent of  
19 your IRP goals -- or not we, but MISO will say we're  
20 going to meet a hundred percent of our IRP goals and  
21 we're going to meet 85 percent of our aspirational goals  
22 that -- that they -- that Commissioner Fedorchak was  
23 just describing.

24 COMMISSIONER FEDORCHAK: And I do think it's  
25 important to re-emphasize that MISO is trying to build a

1 system that enables the meeting of those. They aren't  
2 meeting them. They're building a system that allows  
3 their members to meet their IRP goals and, like Adam  
4 said, 85 percent of the state mandates as a planning --  
5 that's how they plan. It's their planning protocol.

6 So back to this resource additions, this is  
7 based on what they're seeing in North Dakota IRPs  
8 mostly?

9 ADAM RENFANDT: IRPs. They will put in some  
10 units that are model built --

11 COMMISSIONER FEDORCHAK: For reliability? To  
12 meet reliability standards?

13 ADAM RENFANDT: For -- yeah, for -- yeah, for  
14 reliability standards as well as engineering kind of  
15 judgment, I guess, if you will.

16 You know, you'll notice that there's -- you  
17 know, on this case, you know, there's actually a  
18 combined cycle gas being built. You know, that was --  
19 you know, that's likely the -- the conversion of maybe  
20 the goal --

21 COMMISSIONER FEDORCHAK: Oh. Oh. They're  
22 looking at converting that to --

23 ADAM RENFANDT: Yeah.

24 COMMISSIONER FEDORCHAK: -- in their  
25 assumptions?

1           ADAM RENFANDT: Yeah. We -- yeah, in their  
2 assumptions so...

3           COMMISSIONER FEDORCHAK: Do they take into  
4 consideration the EPA regulations?

5           ADAM RENFANDT: They haven't.

6           COMMISSIONER FEDORCHAK: I don't think so.

7           ADAM RENFANDT: No, no. No, they haven't.

8           COMMISSIONER FEDORCHAK: All right.

9           ADAM RENFANDT: So then kind of moving onto the  
10 next page, so these are the benefits that they've  
11 identified. The first benefit is --

12          COMMISSIONER FEDORCHAK: Let's talk for a minute  
13 about how these get developed.

14          ADAM RENFANDT: Okay.

15          COMMISSIONER FEDORCHAK: Because each one of  
16 these processes is like a big, long, you know,  
17 stakeholder input on identifying what benefits are going  
18 to be used to measure the overall -- the overall benefit  
19 calculation. And these are where you get some questions  
20 from the (indiscernible). The last -- I -- he's -- he's  
21 pretty squishy on some of these benefit metrics, but  
22 even more so on Tranche 2.

23                 So, anyway, was there anything in particular  
24 about these benefit metrics that raised concern in the  
25 stakeholder process, Adam?

1           I mean, I know we -- we said that -- we objected  
2     to the decarbonization benefit being used. And so then,  
3     in response to that, they took that out and told us what  
4     our cost-benefit would be without it. And it was still  
5     higher than the one threshold. Significantly higher.

6           ADAM RENFANDT: Yeah. And it -- there's very  
7     little benefit that's derived from this decarbonization  
8     benefit. The BC, the benefit-cost ratio, goes -- when  
9     you remove it, goes from 2.8 to 2.6. So that's kind of  
10    saying if you spend, like, a dollar, you get \$2.06 back.

11          COMMISSIONER CHRISTMANN: So the two  
12    overwhelmingly large factors in the -- in the benefit  
13    column for Zone 1 are, one, congestion and fuel savings,  
14    two, avoided capital cost of local resource investment;  
15    correct?

16          ADAM RENFANDT: Correct. Yep.

17          COMMISSIONER CHRISTMANN: Okay. For this  
18    project, not Tranche 1 but this project, and for North  
19    Dakota, not MISO, what are the avoided capital costs of  
20    local resource investment that this -- what costs does  
21    this avoid?

22          ADAM RENFANDT: So this avoids the building of  
23    local generation that would cost more.

24          COMMISSIONER CHRISTMANN: Like the gas plant  
25    that we ordered Xcel to build, for example? That's the

1       only one I can think of.

2               COMMISSIONER FEDORCHAK:   Again, it's modeled.

3       It's not necessary --

4               ADAM RENFANDT:   Yeah.   It's kind -- yeah, it's  
5       kind of like, you know, when we had the original MVP  
6       portfolio, we had to -- we could share resources and  
7       then reduce local overbuild.

8               So if we're able to spread that out with  
9       transmission, then there's a point in which you're  
10      supposed to hit the sweet spot, and it's called the  
11      "bathtub curve," right, in which you want to put your  
12      transmission overlay on your resources such that you're  
13      all in a sharing pool and you're able to then not build  
14      something -- not have a grid that's Balkanized such that  
15      -- or have no wires and we've got to overbuild a ton of  
16      maybe thermal generation because we couldn't then use a  
17      renewable source maybe.

18              COMMISSIONER CHRISTMANN:   So the biggest share  
19      of our benefits are avoiding costs that we can't  
20      identify.

21              COMMISSIONER FEDORCHAK:   Well, that's not --  
22      their model costs out to 2039.   I mean, you have to look  
23      at the time frame.   So -- and that -- these might be  
24      good questions for -- because MISO should be able to  
25      identify those things for this project, for that -- for

1 actually this line or those two lines. So that's  
2 probably a question we could ask them for -- to address.  
3 And I think it's an important one to understand, you  
4 know, how all this stuff is pulled together.

5 COMMISSIONER CHRISTMANN: The other one that is  
6 very significant in that is the congestion and fuel  
7 savings. And so I think any of us that have, in recent  
8 years, watched LMP prices have seen the congestion  
9 that's over in that area; correct?

10 ADAM RENFANDT: Yep.

11 COMMISSIONER CHRISTMANN: And this study was  
12 approved in 2022 so it was done well before Applied  
13 Digital was even discussed. Because the -- my own just  
14 occasional but pretty frequent viewing of LMP prices,  
15 I've seen the heat map. I'm seeing a lot less  
16 congestion problems over there. And we've only got the  
17 first phase of Applied Digital going. So I don't know  
18 that these congestion benefits are really there for us  
19 anymore.

20 COMMISSIONER FEDORCHAK: They might not be.  
21 It's a fair question. And, also, Adam's not defending  
22 MISO.

23 COMMISSIONER CHRISTMANN: I know.

24 (Laughter)

25 COMMISSIONER FEDORCHAK: Adam is not MISO so...



1           COMMISSIONER CHRISTMANN: Well, he's kind of  
2 bringing their case.

3           COMMISSIONER FEDORCHAK: He's been trying so  
4 that we can, yeah, understand.

5           COMMISSIONER HAUGEN-HOFFART: And I guess that  
6 was my question in looking at some of this, is how much  
7 of this, I mean, gets updated as things go on? Like  
8 Randy brought up Applied Digital. I mean, how is that  
9 fed into MISO and updated so we have current -- more  
10 current information? I mean --

11          COMMISSIONER FEDORCHAK: Once these projects are  
12 approved, they don't go back and update all this. Like  
13 this was agreed on and approved by the board a year --  
14 more than a year ago. So they don't go back --

15          COMMISSIONER HAUGEN-HOFFART: Okay.

16          COMMISSIONER FEDORCHAK: -- and keep changing  
17 these.

18          COMMISSIONER HAUGEN-HOFFART: Okay.

19          COMMISSIONER FEDORCHAK: -- and re-justifying  
20 the case or changing the case.

21          COMMISSIONER HAUGEN-HOFFART: Well, I wouldn't  
22 have to say "re-justify" but just more accurate data  
23 that we as PUCs could have. Like when we -- when the --  
24 when the Tranche 1, when this case comes before us, we  
25 have more information, but lesson learned.

1           COMMISSIONER FEDORCHAK: And we don't ever see  
2 all of Tranche 1.

3           COMMISSIONER HAUGEN-HOFFART: Right.

4           COMMISSIONER FEDORCHAK: This is the only line  
5 we'll see.

6           COMMISSIONER HAUGEN-HOFFART: Right. But things  
7 have changed since then. I mean -- point taken.

8           COMMISSIONER FEDORCHAK: Yeah. We should -- we  
9 could ask MISO for them to provide us that for this -- I  
10 don't know if they've got it at that granular level or  
11 not.

12          ADAM RENFANDT: To provide?

13          COMMISSIONER FEDORCHAK: The congestion fuel  
14 savings, avoided capital costs of local investment --  
15 well, even all the benefit metrics, if they can, for --  
16 for Zone 1 for just --

17          ADAM RENFANDT: Just --

18          COMMISSIONER FEDORCHAK: -- Jamestown to  
19 Ellendale.

20          ADAM RENFANDT: Yeah, okay.

21          COMMISSIONER HAUGEN-HOFFART: Or could MDU? I'm  
22 sorry, but could MDU provide us any of that?

23          COMMISSIONER FEDORCHAK: I doubt it. They don't  
24 run the models.

25          ADAM RENFANDT: Yeah, they wouldn't have access

1 to that level of information and detail that MISO --

2 COMMISSIONER HAUGEN-HOFFART: I got my answer.

3 COMMISSIONER FEDORCHAK: And the thing is, the  
4 other thing to remember, and this is just a part of the  
5 reality of MISO, is if you look at the size of our zone,  
6 I mean there's a lot of what's happening in Minnesota  
7 and part of Wisconsin driving Zone 1. And that's --  
8 that's the reality for us in North Dakota and MISO.  
9 Zone 1 includes all of Minnesota and a chunk of  
10 Wisconsin.

11 VICTOR SCHOCK: So -- especially on the fuel  
12 cost savings, it's one -- because both RTOs do that kind  
13 of comparison when they run modeling. And it's one  
14 thing I've really struggled with in our zone. Usually  
15 we have trapped generation that can't get out. And when  
16 they do their model, well, this zone or this area is  
17 going to benefit by that trap generation getting out.  
18 Well, I suppose the zone as a whole is going to benefit,  
19 but our prices go up as a result of it.

20 COMMISSIONER FEDORCHAK: Right.

21 VICTOR SCHOCK: So that negative -- that  
22 negative congestion that's happening down there changes  
23 to even keel with the rest of the system. And primarily  
24 in this instance, I think Minnesota's prices probably go  
25 down a slight bit --

1 COMMISSIONER FEDORCHAK: Yep.

2 VICTOR SCHOCK: -- while ours go up to what the  
3 rest of the zone is seeing.

4 COMMISSIONER CHRISTMANN: And this is kind of  
5 one of my concerns here, is so our ratepayers pay to  
6 build this and the benefits are looked at, well, is this  
7 investment here some big benefit, but it's mostly to  
8 whoever the new developer is that comes in and builds  
9 another wind farm. A few landowners but not to most of  
10 these Otter Tail and MDU customers. And I'm just -- I'm  
11 not seeing nearly the benefits or congestion  
12 improvements as what this seems to want to indicate.

13 COMMISSIONER FEDORCHAK: Well, the other issue  
14 that I think is -- two other issues that are relevant  
15 are the reliability savings or reliability impacts and  
16 are the access for our broader generation to get out. I  
17 mean, if there's congestion, there's generators in North  
18 Dakota that are being curtailed. And depending on  
19 price, you know, that hurts them. And, you know, the  
20 higher-price ones are the ones probably being curtailed  
21 first. So that's -- that's another North Dakota issue.

22 COMMISSIONER CHRISTMANN: You know, I guess it's  
23 a separate argument of whether this is the right time to  
24 have the battle, but therein lies a lot of the reason  
25 for me wanting to take on the battle, and I don't even

1 know how the -- where or how the battle would occur,  
2 but, okay, if the issue is somebody else out of state's  
3 need for energy and some developer that wants to come in  
4 and set up some more wind farms here, fine, pay for it.  
5 Not our ratepayers all the time.

6 And so, yes, the RTO forces this cost allocation  
7 on us, but if we don't fight for it -- or fight against  
8 it successfully, guess what? We're going to be paying  
9 for -- was it three that's all south so maybe not that  
10 -- maybe not one of them, but we're going to be paying  
11 for all the rest of them too. And when better than now  
12 to fight it?

13 COMMISSIONER FEDORCHAK: I don't disagree. And  
14 we did fight it. But we --

15 COMMISSIONER CHRISTMANN: MISO.

16 COMMISSIONER FEDORCHAK: At MISO, yeah.

17 COMMISSIONER CHRISTMANN: I'm talking about at  
18 FERC.

19 COMMISSIONER HAUGEN-HOFFART: So is that how it  
20 would play out, I mean, going off of that? Tell me --

21 COMMISSIONER FEDORCHAK: Yeah, I don't know.

22 COMMISSIONER HAUGEN-HOFFART: Can you walk me --  
23 well, first of all, does anybody have anything else,  
24 Chris or Adam, to add to these?

25 CHRIS HANSON: Just a scale -- sorry. I was

1 just going to add that the scale of Tranche 1, the  
2 numbers that we got from MDU and from Otter Tail were  
3 like 10 and a half billion or somewhere between 10 and  
4 10 and a half billion, and the cost per megawatt-hour  
5 that they were estimating in 2031, which was the max  
6 rate, was about \$2.54 per megawatt. So -- so -- or  
7 megawatt-hour. So just as kind of a -- as a scale.

8 Now that -- how that impacts, say, residential  
9 customers is going to depend upon the company. Because  
10 each of the companies has their own allocation  
11 methodology for transmission costs. But just to kind of  
12 give you an average on things, the Tranche 1, on  
13 average, would be about, you know, \$2.54 per  
14 megawatt-hour.

15 So I'll throw -- NSP, as an example, does a  
16 direct allocation per megawatt-hour so that would affect  
17 their customers by \$2.54 per month for a thousand  
18 kilowatts or 1 megawatt of use -- or megawatt-hour of  
19 usage per month.

20 But then we talked about Tranche 2, 3, 4. You  
21 know, as you're getting up into that 50 billion range,  
22 then, you know, you're talking 10, \$15 per megawatt-hour  
23 as a relative scale.

24 COMMISSIONER CHRISTMANN: Okay. Then I need to  
25 be corrected here and find out where I'm wrong. When we

1 had our --

2 COMMISSIONER HAUGEN-HOFFART: Informal?

3 COMMISSIONER CHRISTMANN: -- informal on

4 July 8th, I didn't write down \$2.54 a month. I wrote  
5 \$3.15 a month for --

6 CHRIS HANSON: Yep.

7 COMMISSIONER CHRISTMANN: -- MDU and 5.85 for --

8 CHRIS HANSON: Correct.

9 COMMISSIONER CHRISTMANN: -- Otter Tail.

10 CHRIS HANSON: Correct. So as I said, MDU and  
11 Otter Tail have an allocation methodology that's  
12 different for residential and for commercial,  
13 industrial. I'll use NSP as an example because they do  
14 a per-megawatt-hour allocation so it's a straight --

15 COMMISSIONER CHRISTMANN: Oh.

16 CHRIS HANSON: It's a different methodology but  
17 it's -- it's, I guess you could say, cleaner. But the  
18 average that MISO was allocating, their number was \$2.54  
19 based upon their estimates at the peak in 2031 when all  
20 the projects are up and running before they start to  
21 amortize off.

22 So, yes, you are correct. Like MDU's number,  
23 MDU's number was \$3.15. The memo that I had was 5.75.  
24 And I think Matt Olsen came back and amended that to  
25 5.85 per megawatt-hour. So that's because they used

1 different methodology for allocating those transmission  
2 costs. So you are correct.

3 COMMISSIONER FEDORCHAK: Okay. So I -- and  
4 Randy raised a good question about how, if we deny this,  
5 say, what is the result? Where does it go? Or do the  
6 companies -- where can the companies protest? Or MISO,  
7 I guess.

8 UNIDENTIFIED SPEAKER: Well, I'm still getting  
9 acquainted with this case. And I know you guys asked me  
10 to come in here and have some discussion, but if we have  
11 -- we issue an order with the denial, obviously it  
12 depends on the basis of the denial and it depends on the  
13 basis of the challenge. It could either be in Federal  
14 District Court or it could be in State Court. And so it  
15 would be up to the issue that really is being appealed.

16 COMMISSIONER FEDORCHAK: So the -- Otter Tail or  
17 MDU would likely then decide to take it -- it could.

18 UNIDENTIFIED SPEAKER: It would likely be Otter  
19 Tail or MDU.

20 COMMISSIONER CHRISTMANN: Or MISO.

21 COMMISSIONER FEDORCHAK: Could MISO? Do they  
22 have any --

23 UNIDENTIFIED SPEAKER: Again, depending on the  
24 issue and where it's at.

25 COMMISSIONER CHRISTMANN: Well, let's say --



1           COMMISSIONER FEDORCHAK:    Sure.

2           COMMISSIONER CHRISTMANN:   I mean if -- if it  
3       went to court and the courts backed the Commission on a  
4       denial -- or, no, overturned the Commission on a denial,  
5       well, then it would move forward unless we appealed.  
6       But let's say they backed our decision on a denial,  
7       wouldn't at some point this get to be a FERC thing over  
8       whether the states can stop -- and this could be SPP  
9       too -- stop RTO-approved projects through their PC&N  
10      process? Isn't that something that is going to have to  
11      get determined at some point? Or are they just all  
12      going to go to load pays?

13          UNIDENTIFIED SPEAKER:    So I'm guessing the issue  
14      that you're presenting is an interstate commerce issue  
15      from the discussion that you're providing. And I'd be  
16      happy to have some additional discussion with that, but  
17      I probably would not want to be having that in -- in  
18      open meeting without having an opportunity to review the  
19      tariffs that we're discussing.

20          COMMISSIONER CHRISTMANN:   So we've kind of  
21      touched on these, but I want to re-emphasize two points.  
22      One is, yes, we can talk about avoiding congestion or  
23      avoiding additional investment costs. I haven't found  
24      any basis for those other than someone who likes doing  
25      projects, putting numbers together, I -- I can't see

1 anything.

2 I will point out, though, that among the project  
3 benefits are to accommodate new electric generation  
4 projects. That, to me, that's who ought to be paying at  
5 least a good part of this, if not all of it. Because  
6 that, to me, is the key benefit in this, is to add the  
7 new generators. And to the extent that's for  
8 decarbonization or to meet other states' policy goals,  
9 regardless. The point is to add that generation. And I  
10 think that is the key benefit that this is looking to  
11 solve.

12 The other, though, has to do with reliability  
13 and our discussion. This isn't in, like, the  
14 presentation, I don't think, but I'm using my  
15 recollection. Correct me if it's wrong. The real  
16 reliability issue in North Dakota that was highlighted  
17 as an example that this could take care of was the very  
18 near miss at Jamestown.

19 And I think it's been said before, but kudos  
20 again to Otter Tail for still hanging on to that old  
21 generator in town there that almost never gets used and  
22 being able to keep Jamestown going as they did.

23 But as this plays out in my mind, this project,  
24 what I have heard was, if I were to add all the new  
25 generation, it generally flows from that -- like the

1 Ellendale point down through South Dakota and Minnesota  
2 and out, but if there's problems there, they need this  
3 alternative route to get it up to Jamestown and then  
4 from there on it can flow through Fargo and away.

5 Okay. If -- as far as to add the new  
6 generation, I guess that makes sense. It also tells me  
7 there's plenty of capacity in the transmission lines  
8 between Jamestown and Fargo for all this to flow that  
9 way, which tells me when Xcel builds their gas plant  
10 there, it can flow the other way and that can just as  
11 easily be used to help solve any potential energy  
12 shortfalls in Jamestown.

13 And so I think the one investment that I can see  
14 that this is going to eliminate the need for is that  
15 generation plant. And I guess it's fine as long as  
16 we're willing to have service when it's windy but not  
17 when it's not. I don't think most of the people are.

18 COMMISSIONER FEDORCHAK: Randy, did you review  
19 the project benefits identified in the companies'  
20 application?

21 COMMISSIONER CHRISTMANN: I have, but it's been  
22 a while and I don't know if I have --

23 COMMISSIONER FEDORCHAK: How did we -- we had an  
24 informal, right --

25 COMMISSIONER HAUGEN-HOFFART: Yeah.

1           COMMISSIONER FEDORCHAK:  -- on this?  That's how  
2   we --

3           COMMISSIONER CHRISTMANN:  Was that presented  
4   then or was that in the case earlier?

5           COMMISSIONER HAUGEN-HOFFART:  Well, it's --  
6   both.

7           COMMISSIONER FEDORCHAK:  Both.

8           COMMISSIONER HAUGEN-HOFFART:  It's in their  
9   application and the --

10          COMMISSIONER CHRISTMANN:  What you're looking  
11   at, though --

12          COMMISSIONER FEDORCHAK:  This is their  
13   application.

14          COMMISSIONER CHRISTMANN:  -- this.

15          COMMISSIONER FEDORCHAK:  Right.

16          COMMISSIONER CHRISTMANN:  Okay.

17          COMMISSIONER FEDORCHAK:  This is the  
18   application.

19          COMMISSIONER CHRISTMANN:  What page?

20          COMMISSIONER FEDORCHAK:  11.  And to some extent  
21   page 9 is the project need.

22          COMMISSIONER CHRISTMANN:  Okay.

23          COMMISSIONER FEDORCHAK:  I just don't know when  
24   they -- when all these problems, these reliability  
25   problems, like at 40 transmission elements with

1 excessive thermal loadings for N-1 contingencies and 70  
2 elements with excessive loading, and then down below the  
3 project improves voltages in the Red River Valley by  
4 relieving 97 voltage violations and 91 voltage  
5 violations for N-1-1 contingencies, like how many of  
6 those are North Dakota customers? How much of that is  
7 -- how much of that is a North Dakota issue?

8 I mean, I am -- I want to know -- I would have  
9 to be reminded of that. I'd have to have a more  
10 technical discussion, I think, with the company to  
11 understand the implications for our customers of not  
12 having this line.

13 VICTOR SCHOCK: Isn't N-1 what drives congestion  
14 pricing?

15 COMMISSIONER FEDORCHAK: I don't --  
16 Adam?

17 ADAM RENFANDT: If it's overloaded, so if it's  
18 overloaded, it could be overloaded for a number of  
19 reasons. You know, an outage definitely is it. I mean,  
20 that creates congestion such that, if you can't -- if  
21 you can't have -- if you can't fire up or move electrons  
22 from point A to point B and then you might have to go  
23 and fire up a more expensive peaker, for instance, if  
24 you've got a line outage, for instance.

25 VICTOR SCHOCK: Right.

1 ADAM RENFANDT: Or something like that, yeah.

2 VICTOR SCHOCK: But congestion pricing -- and  
3 this is, I think, the case in both RTOs. It isn't  
4 because the lines that are in operation at that moment  
5 can't handle the load that's going across them. It's in  
6 the event of a loss of your biggest element --

7 ADAM RENFANDT: Uh-huh.

8 VICTOR SCHOCK: -- the remaining system isn't  
9 able to pick that load up without tripping.

10 ADAM RENFANDT: It doesn't have to be -- like  
11 you can get congestion if it just -- if it -- in the  
12 event that it would -- if in the event that you had an  
13 outage.

14 VICTOR SCHOCK: Right.

15 ADAM RENFANDT: In that case, yeah, then --  
16 yeah, then you -- but you're not actually in an outage.

17 VICTOR SCHOCK: Right. No, I absolutely agree  
18 that you're not in an outage, but the pricing for  
19 congestion, I think, is based on that N-1 scenario.

20 ADAM RENFANDT: Yeah, that's how the grid  
21 operates. Yeah. Yep.

22 VICTOR SCHOCK: So all that is to say I think  
23 that's a good portion of what they're speaking to in the  
24 40 elements with excessive loading for the first  
25 transmission element loss.

1 ADAM RENFANDT: Yeah, yeah, that's --

2 VICTOR SCHOCK: I think that's largely  
3 congestion.

4 I don't know if that -- does that make some  
5 sense?

6 COMMISSIONER FEDORCHAK: And so?

7 VICTOR SCHOCK: I'm not drawing any conclusions  
8 from that. It was just that you started to kind of talk  
9 about it a little bit and I -- I don't know that that's  
10 the entire answer --

11 COMMISSIONER FEDORCHAK: So the benefits of  
12 relieving that are -- it's not a reliability concern.

13 VICTOR SCHOCK: Not -- I'm not even saying that  
14 definitively. I think your question was what those 40  
15 elements are. And I think probably a good chunk of them  
16 are probably that N-1 scenario where overloading --

17 COMMISSIONER FEDORCHAK: Well, no. I'll put it  
18 a lot more simply.

19 VICTOR SCHOCK: Okay.

20 COMMISSIONER FEDORCHAK: That's a lot of  
21 technical mumbo jumbo. What I want to know is how does  
22 this matter to North Dakota customers?

23 VICTOR SCHOCK: Sure.

24 COMMISSIONER FEDORCHAK: Does it? Or is it just  
25 a bunch of sentences to make it seem like, "Jeez, that

1 sounds bad, we better approve this"? Right?

2 VICTOR SCHOCK: Yeah.

3 COMMISSIONER FEDORCHAK: So I don't know.

4 Maybe --

5 VICTOR SCHOCK: Sure.

6 COMMISSIONER FEDORCHAK: -- it is a bunch --  
7 maybe it is a big problem for North Dakota customers,  
8 maybe it isn't. I don't -- I can't tell by this, and I  
9 don't recall exploring that deeply in our informal with  
10 them. So I would want to know that so we don't -- you  
11 know, so I can have that information --

12 VICTOR SCHOCK: Yep.

13 COMMISSIONER FEDORCHAK: -- in making my  
14 decision anyway.

15 VICTOR SCHOCK: Do you want to know that from  
16 the company or from MISO?

17 COMMISSIONER HAUGEN-HOFFART: The company.

18 COMMISSIONER FEDORCHAK: The company.

19 COMMISSIONER HAUGEN-HOFFART: It's in their  
20 application.

21 UNIDENTIFIED SPEAKER: So just for clarification  
22 on that, they're basically saying when they analyze this  
23 solution, they're kind of looking at it in conjunction  
24 with the Big Stone, Alexandria, the other projects on  
25 Zone 1. So you're saying, "Okay, well, I get that this



1 applied to all of Zone 1, but of that -- of these  
2 issues, how many -- how much of the issue applied to  
3 North Dakota specifically?" So we're kind of getting  
4 lumped in with the whole zone.

5 COMMISSIONER FEDORCHAK: Right.

6 UNIDENTIFIED SPEAKER: And this is the issue to  
7 the whole zone, but how much of it applies specifically  
8 to us?

9 COMMISSIONER FEDORCHAK: Yeah. And what is the  
10 impact of this? Is it a price issue? Is it -- is it a  
11 lot -- you know, we can't get power at certain times?  
12 It's hurting the lines? Like what is the actual -- what  
13 are the issues that it's causing?

14 Yeah, and same -- I mean, the company might have  
15 a -- probably MISO needs to get us more specifics of the  
16 impacts of this project on the benefit metrics that  
17 they've used here. And if they can get those for North  
18 Dakota versus all of Zone 1, that would be helpful too.

19 COMMISSIONER CHRISTMANN: You know, when -- when  
20 it's simplified down, when -- and I don't know who was  
21 speaking at the time, I presume Otter Tail because it  
22 was about Jamestown, but between the two when we had the  
23 informal, when they talked about that situation in  
24 Jamestown that I referenced earlier, okay, yeah, that is  
25 something that happened, aware of it, it made a good

1 case in point to me, I was thinking, okay, now I'm  
2 seeing some benefit here until, like I say, then I  
3 thought more about it, except for, supposedly, within a  
4 little over a year or -- things usually run late, but in  
5 the relatively near term we had a new gas plant go in  
6 Fargo. That should be able to do it. I guess when they  
7 just say, "Oh, well, there's all these benefits," it's  
8 not very persuasive to me.

9 COMMISSIONER FEDORCHAK: Uh-huh.

10 COMMISSIONER CHRISTMANN: Tell me what they are,  
11 where the shortages are, what can't we do. And we'll  
12 see once -- whether it seems it to me that -- or it  
13 seems to us as a group, as a body, whether those  
14 benefits then are primarily going to the ratepayers that  
15 are being asked to pay for this or to somebody else.

16 COMMISSIONER FEDORCHAK: Yep. Good questions.  
17 As you said, like, we tried in the cost allocation  
18 discussion to make these points. They weren't -- they  
19 didn't win the day. This is our next -- this is our  
20 next tool to try to address them.

21 COMMISSIONER CHRISTMANN: And while we're on  
22 this, I -- a legal question -- oh, did you have  
23 something else?

24 COMMISSIONER FEDORCHAK: Well, I just -- but I'm  
25 not -- I'm also -- you know, I definitely -- I'm not

1     sure that this doesn't have just merits for North Dakota  
2     on -- on a technical side so I'm not, like -- I'm very  
3     open to hearing what the benefits are to our customers  
4     because I -- I think that there are -- and to our  
5     generators, I guess. I'd like to evaluate -- be  
6     evaluating that along with it. So...

7             COMMISSIONER CHRISTMANN: I think you got it  
8     covered.

9             VICTOR SCHOCK: So to clarify -- clarify what I  
10    think I heard, so we're going to get a response from  
11    MISO on the benefit metrics for Zone 1 on this line  
12    specifically. So I think if Adam can reach out, that's  
13    probably the most efficient.

14            And then whatever response you get, if you want  
15    to pass that through Chris.

16            And then, Chris, if you can work with Otter Tail  
17    and MDU on a response for what these elements savings  
18    and benefits are. And then, you know, if it's  
19    reliability benefit, how and what circumstance?

20            And we'll get all of that submitted into a  
21    couple of docket entries, hopefully, rather than just  
22    some emails flying around. And --

23            COMMISSIONER CHRISTMANN: And, you know, yes, I  
24    know these things take time, but there's a reason why  
25    they take time, so people don't make bad decisions. But

1     it seems like as far as the -- anything having to do  
2     with congestion in that area of the state, this should  
3     be recalculated based on Applied Digital's second phase  
4     being in effect. Because I understand they're pretty  
5     far along with it already and the first phase is already  
6     going. And, like I say, from my just viewing of heat  
7     maps, it's having quite an impact. So maybe I'm wrong  
8     about that, but it doesn't appear that way to me.

9             COMMISSIONER HAUGEN-HOFFART: But it's a good  
10    point to evaluate.

11            COMMISSIONER FEDORCHAK: Yeah. And then maybe  
12    they can provide information about what other additional  
13    generation they've cited there in their long-range  
14    transmission planning that drove the need for these  
15    lines. Because it isn't just what exists today. It's  
16    much more what they modeled to becoming. So, you know,  
17    that -- that is part of this equation so they should  
18    explain that.

19            UNIDENTIFIED SPEAKER: The generation that --  
20    that showed up?

21            COMMISSIONER FEDORCHAK: Where they -- yeah.  
22    That's going to -- you know, it isn't just --

23            COMMISSIONER HAUGEN-HOFFART: Planning.

24            COMMISSIONER FEDORCHAK: -- well, we took care  
25    of the congestion now because we've got Applied Digital

1     there.  There's a bunch more -- how many more wind farms  
2     did they model being developed in the eastern part of  
3     North Dakota that will drive congestion up again?  And  
4     those were driven by -- probably by Minnesota  
5     environmental goals and others but -- yeah.

6             UNIDENTIFIED SPEAKER:  Yeah.

7             COMMISSIONER FEDORCHAK:  That would be helpful  
8     to know, what kind of generation they modeled in that  
9     area --

10            UNIDENTIFIED SPEAKER:  And where.

11            COMMISSIONER FEDORCHAK:  -- for this.

12            UNIDENTIFIED SPEAKER:  Yeah, we can -- we can  
13     get that.

14            COMMISSIONER HAUGEN-HOFFART:  And I think  
15     separately, I mean we're going to work with Jack as far  
16     as maybe some next steps --

17            UNIDENTIFIED SPEAKER:  Sure.

18            COMMISSIONER HAUGEN-HOFFART:  -- if denied just  
19     for an understanding as far as litigation.

20            UNIDENTIFIED SPEAKER:  Be happy to have that  
21     discussion.  I would note as well, though, after we  
22     receive all the documents, all the information that's  
23     necessary, it may be worth considering appointing  
24     advocacy staff if we need to flush out certain issues a  
25     little better and maybe have a formal hearing on it as

1 well.

2 COMMISSIONER FEDORCHAK: Yeah. That's a good  
3 point. I'd be open to that, because I really do want to  
4 understand the companies' side of it and the benefits  
5 that they are seeing.

6 COMMISSIONER CHRISTMANN: Anything else?

7 COMMISSIONER HAUGEN-HOFFART: No. I think this  
8 was -- first of all, I want to say thanks to everyone  
9 for getting this lined up so quickly on the work  
10 session. And, no, I have nothing further. I look  
11 forward to the additional information to receive to  
12 evaluate.

13 COMMISSIONER CHRISTMANN: Okay. With that,  
14 thanks, everybody, and this work session is concluded.

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Dated this date of September 8, 2025.

*Lisa A. Hulm*

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# Otter Tail Power Co./MDU Co. 345kV Line, Case No. PU-24-91

## August 19, 2024, Work session ND PUBLIC SERVICE COMMISSION

<p style="text-align: right;">1</p> <p style="text-align: center;">STATE OF NORTH DAKOTA PUBLIC SERVICE COMMISSION</p> <p>Otter Tail Power Company/Montana-Dakota Utilities Co. 345kV Transmission Line - Jamestown to Ellendale Public Convenience &amp; Necessity</p> <p>Case No. PU-24-91</p> <p style="text-align: center;">TRANSCRIPT OF WORK SESSION August 19, 2024</p> <p style="text-align: center;">APPEARANCES</p> <p>Commissioners Sheri Haugen-Hoffart, Randy Christmann, and Julie Fedorchak</p> <p>PUBLIC SERVICE COMMISSION: Brian Johnson, Christopher Hanson, Adam Renfandt, Victor Schock, John Schuh</p>	<p>1 So my first question is, if it's been identified</p> <p>2 in the Tranche 1, can we quantify those benefits for MDU</p> <p>3 and Otter Tail to look at it? That's my first question.</p> <p>4 Has that been -- I guess I assumed, and I shouldn't do</p> <p>5 that, that that was studied so we -- can we get some</p> <p>6 quantification numbers on that, the benefit of that</p> <p>7 line? So that's my first question. And I guess if we</p> <p>8 can get that, then that might lead to some more</p> <p>9 discussion.</p> <p>10 So I don't know. I'm going to look to Adam and</p> <p>11 Chris or Julie to maybe give me some history there on</p> <p>12 that, based on the two years that I've been on the</p> <p>13 Commission in that area, that that was -- has been</p> <p>14 identified. And I thought MISO maybe did a good job on</p> <p>15 identifying that. And this is the one, the only project</p> <p>16 in Tranche 1 that North Dakota has what I would say is</p> <p>17 maybe benefit. So I'll give that to --</p> <p>18 ADAM RENFANDT: So I've got a couple handouts</p> <p>19 here that might help guide the conversation here.</p> <p>20 COMMISSIONER HAUGEN-HOFFART: Thanks, Adam.</p> <p>21 ADAM RENFANDT: I think I put this in the wrong</p> <p>22 order. I got a couple -- I only have two more. I've</p> <p>23 got this one here. Okay, yeah. There. I think it's in</p> <p>24 that order then.</p> <p>25 So we're here to kind of discuss the Jamestown</p> <p style="text-align: right;">PAGE 3</p>
<p>1 COMMISSIONER CHRISTMANN: Okay. This is a work</p> <p>2 session of the North Dakota Public Service Commission on</p> <p>3 the Otter Tail and MDU Jamestown to Ellendale 345 kV</p> <p>4 transmission line. It's August 19th, 2024. It's Case</p> <p>5 No. PU-24-91.</p> <p>6 I don't have any anything else before turning</p> <p>7 over to the portfolio holder.</p> <p>8 Commissioner Fedorchak, do you?</p> <p>9 COMMISSIONER FEDORCHAK: No, I don't.</p> <p>10 COMMISSIONER CHRISTMANN: Okay. It's all yours,</p> <p>11 Commissioner Haugen-Hoffart.</p> <p>12 COMMISSIONER HAUGEN-HOFFART: Well, thank you.</p> <p>13 I guess going back to our commission meeting</p> <p>14 last week, I proposed an order and we got into some</p> <p>15 discussion. And so I think there's those discussion</p> <p>16 items that we need to go through. And I'm just going to</p> <p>17 say I'm -- I'm going to give -- just may -- my question,</p> <p>18 or lay it out and Randy and Julie and staff can answer</p> <p>19 this.</p> <p>20 You know, looking at that Jamestown to Ellendale</p> <p>21 line, we've identified there's some congestions that we</p> <p>22 can -- need to get -- being an exporter, get things out.</p> <p>23 So when I look at MISO and studying Tranche 1, this is</p> <p>24 an area that was identified there would be benefits on</p> <p>25 building this 345 kV line.</p> <p style="text-align: right;">PAGE 2</p>	<p>1 to Ellendale 345 kV line that was part of MISO's Tranche</p> <p>2 1. I believe it was passed by the MISO board of</p> <p>3 directors in June of 2022.</p> <p>4 So the first page you see, it is an overview.</p> <p>5 When we think of LRTP projects, we kind of have to think</p> <p>6 of them more in a portfolio approach. And in this</p> <p>7 particular line, it happens to have been studied and</p> <p>8 paired well with not just the single line, which is the</p> <p>9 Jamestown to Ellendale line, but also the Big Stone</p> <p>10 South to Alexandria to Cass- -- Cassie's Crossing.</p> <p>11 When it comes down to the benefits, there are</p> <p>12 benefits in terms of figuring out what kind of</p> <p>13 reliability benefits there are. And in this case you'll</p> <p>14 see that this is from a MISO presentation that indicates</p> <p>15 that the Jamestown to Ellendale line as well as in</p> <p>16 combination with the Big Stone South to Cassie's</p> <p>17 Crossing relieves 40 elements with excess loadings for</p> <p>18 the first transmission element loss or the N-1 and some</p> <p>19 of the elements with excess of loading for the second</p> <p>20 transmission element.</p> <p>21 When MISO first started going through their</p> <p>22 analysis, they looked at several alternatives. They</p> <p>23 focused a lot on six of them. They look at largely --</p> <p>24 largely what kind of effect in terms of loadings it will</p> <p>25 have, and it will compare to see if, okay, if it can</p> <p style="text-align: right;">PAGE 4</p>

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<p>1 identify a mini portfolio project, if you will, that</p> <p>2 relieves the most. And they also tend to look somewhat</p> <p>3 at the cost of those lines, but really it's a</p> <p>4 reliability analysis. And they also then perform an</p> <p>5 economic analysis on it as well.</p> <p>6 So kind of getting back to the question on the</p> <p>7 benefits that this provides, this first page shows, for</p> <p>8 Zone 1 through 7, as we are in -- we are located in Zone</p> <p>9 1, so that would be to the yellow, to the right of that</p> <p>10 chart.</p> <p>11 Now this is the most conservative, what you call</p> <p>12 cost-benefit analysis. So the entire portfolio was --</p> <p>13 cost \$10.3 billion. And then they figure out, okay,</p> <p>14 well, what kind of benefits can we attach to it such</p> <p>15 that the benefit-cost ratio is 1.0 or greater. So per</p> <p>16 the tariff, that's the hurdle that we're looking at.</p> <p>17 And what do I mean by "the most conservative</p> <p>18 one" is that they also show this for a 40-year present</p> <p>19 value for benefits as well as they increase the value of</p> <p>20 loss load that they give their other metrics to</p> <p>21 something that is probably a bit unrealistic.</p> <p>22 So I think when people talk about and when you</p> <p>23 hear numbers reported, they're mainly talking -- they're</p> <p>24 talking about these numbers, which is the most</p> <p>25 conservative of them.</p> <p>PAGE 5</p>	<p>1 this -- assumptions that drove that?</p> <p>2 ADAM RENFANDT: Okay. So the assumptions that</p> <p>3 drive that is that starting off in the future's process</p> <p>4 when we first start taking a look at where to place</p> <p>5 these lines, we have to take a look at, okay, we have to</p> <p>6 meet certain IRPs, right? We have to meet our IRP</p> <p>7 goals.</p> <p>8 COMMISSIONER FEDORCHAK: And "we" meaning MISO?</p> <p>9 MISO.</p> <p>10 ADAM RENFANDT: MISO. MISO.</p> <p>11 COMMISSIONER FEDORCHAK: Not we.</p> <p>12 ADAM RENFANDT: Yeah, yeah, we. Yes.</p> <p>13 COMMISSIONER FEDORCHAK: MISO says?</p> <p>14 ADAM RENFANDT: Yeah.</p> <p>15 COMMISSIONER FEDORCHAK: Yeah.</p> <p>16 ADAM RENFANDT: So MISO will collect every</p> <p>17 utilities' IRPs and they'll take that and say, okay, we</p> <p>18 need to -- you know, we need to achieve that.</p> <p>19 And then they also will meet a certain amount of</p> <p>20 goals that are not -- that aren't just goals. They're</p> <p>21 just -- you know, kind of wishes, if you will, that</p> <p>22 aren't -- that aren't mandated by the legislature, for</p> <p>23 instance.</p> <p>24 COMMISSIONER HAUGEN-HOFFART: So give me an</p> <p>25 example of a goal that we might bring forward.</p> <p>PAGE 7</p>
<p>1 So you can see that we're in Zone 1. So the</p> <p>2 minimum is 2.8. And then that's where the max comes in.</p> <p>3 So we've always tended -- tend to focus on the minimum</p> <p>4 benefits that we can achieve.</p> <p>5 And if we then go and look at the second page --</p> <p>6 COMMISSIONER FEDORCHAK: And just to clarify,</p> <p>7 this is for the whole -- the whole portfolio, not just</p> <p>8 this line?</p> <p>9 ADAM RENFANDT: Right. Yeah.</p> <p>10 COMMISSIONER FEDORCHAK: Not just the two lines,</p> <p>11 it's the whole --</p> <p>12 ADAM RENFANDT: Yeah.</p> <p>13 COMMISSIONER FEDORCHAK: -- all of Tranche 1?</p> <p>14 ADAM RENFANDT: And we have asked before to --</p> <p>15 for them to break it down further and more granularly.</p> <p>16 Yeah, that's maybe something that we're working on, but</p> <p>17 these benefit metrics and BC cost ratios are for the</p> <p>18 entire \$10.3 billion. Because they're all supposed to</p> <p>19 work together in one portfolio to deliver value.</p> <p>20 So if we take a look at the --</p> <p>21 COMMISSIONER FEDORCHAK: One more quick question</p> <p>22 on that one, Adam. The inset over there on the right,</p> <p>23 is that North Dakota resource additions by 2039?</p> <p>24 ADAM RENFANDT: Yes, they are.</p> <p>25 COMMISSIONER FEDORCHAK: So can you talk about</p> <p>PAGE 6</p>	<p>1 ADAM RENFANDT: If it was --</p> <p>2 COMMISSIONER FEDORCHAK: That's the -- not us</p> <p>3 really. We don't have these.</p> <p>4 ADAM RENFANDT: Yeah.</p> <p>5 COMMISSIONER FEDORCHAK: It's other states that</p> <p>6 have their goals and they'll do a certain percentage of</p> <p>7 them.</p> <p>8 ADAM RENFANDT: Yep. Right.</p> <p>9 COMMISSIONER CHRISTMANN: We have a goal but</p> <p>10 it's long been exceeded --</p> <p>11 COMMISSIONER FEDORCHAK: Well, these are more</p> <p>12 like state -- the IRPs are what the companies are</p> <p>13 planning, right? So they assume that's going to happen,</p> <p>14 because the companies are planning for those at least.</p> <p>15 They work to build a system that is going to meet the</p> <p>16 needs of their members, which are the investor -- the</p> <p>17 people with the IRPs.</p> <p>18 ADAM RENFANDT: Uh-huh.</p> <p>19 COMMISSIONER FEDORCHAK: And then they'll meet</p> <p>20 the -- then they'll build a system to reach a certain</p> <p>21 percentage of, say, Minnesota's renewable mandates or</p> <p>22 Wisconsin's or whatever. That -- that's the other --</p> <p>23 ADAM RENFANDT: Yep, right.</p> <p>24 COMMISSIONER FEDORCHAK: -- piece component.</p> <p>25 ADAM RENFANDT: Yeah. And in this component --</p> <p>PAGE 8</p>

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<p>1 COMMISSIONER FEDORCHAK: Of the futures. 2 ADAM RENFANDT: Of the futures. 3 COMMISSIONER FEDORCHAK: These are the 4 futures -- 5 ADAM RENFANDT: Yeah, yeah. And that's 6 another -- 7 COMMISSIONER FEDORCHAK: -- that help to 8 (indiscernible) how -- and they're not like, you know, 9 meeting like a hundred percent of any future. They're 10 just used as the guidelines to begin to imagine what 11 kind of system we're going to need. Because nobody 12 really knows, but these are the things that direct and 13 guide what this future system they think is going to 14 need based on what people are putting in their plans. 15 ADAM RENFANDT: And that's an important point 16 because we're looking at the year 2039. And by 2039, in 17 this particular case of what -- what all of this benefit 18 metrics is based upon is that you meet 100 percent of 19 your IRP goals -- or not we, but MISO will say we're 20 going to meet a hundred percent of our IRP goals and 21 we're going to meet 85 percent of our aspirational goals 22 that -- that they -- that Commissioner Fedorchak was 23 just describing. 24 COMMISSIONER FEDORCHAK: And I do think it's 25 important to re-emphasize that MISO is trying to build a</p> <p>PAGE 9</p>	<p>1 ADAM RENFANDT: Yeah. We -- yeah, in their 2 assumptions so... 3 COMMISSIONER FEDORCHAK: Do they take into 4 consideration the EPA regulations? 5 ADAM RENFANDT: They haven't. 6 COMMISSIONER FEDORCHAK: I don't think so. 7 ADAM RENFANDT: No, no. No, they haven't. 8 COMMISSIONER FEDORCHAK: All right. 9 ADAM RENFANDT: So then kind of moving onto the 10 next page, so these are the benefits that they've 11 identified. The first benefit is -- 12 COMMISSIONER FEDORCHAK: Let's talk for a minute 13 about how these get developed. 14 ADAM RENFANDT: Okay. 15 COMMISSIONER FEDORCHAK: Because each one of 16 these processes is like a big, long, you know, 17 stakeholder input on identifying what benefits are going 18 to be used to measure the overall -- the overall benefit 19 calculation. And these are where you get some questions 20 from the (indiscernible). The last -- I -- he's -- he's 21 pretty squishy on some of these benefit metrics, but 22 even more so on Tranche 2. 23 So, anyway, was there anything in particular 24 about these benefit metrics that raised concern in the 25 stakeholder process, Adam?</p> <p>PAGE 11</p>
<p>1 system that enables the meeting of those. They aren't 2 meeting them. They're building a system that allows 3 their members to meet their IRP goals and, like Adam 4 said, 85 percent of the state mandates as a planning -- 5 that's how they plan. It's their planning protocol. 6 So back to this resource additions, this is 7 based on what they're seeing in North Dakota IRPs 8 mostly? 9 ADAM RENFANDT: IRPs. They will put in some 10 units that are model built -- 11 COMMISSIONER FEDORCHAK: For reliability? To 12 meet reliability standards? 13 ADAM RENFANDT: For -- yeah, for -- yeah, for 14 reliability standards as well as engineering kind of 15 judgment, I guess, if you will. 16 You know, you'll notice that there's -- you 17 know, on this case, you know, there's actually a 18 combined cycle gas being built. You know, that was -- 19 you know, that's likely the -- the conversion of maybe 20 the goal -- 21 COMMISSIONER FEDORCHAK: Oh. Oh. They're 22 looking at converting that to -- 23 ADAM RENFANDT: Yeah. 24 COMMISSIONER FEDORCHAK: -- in their 25 assumptions?</p> <p>PAGE 10</p>	<p>1 I mean, I know we -- we said that -- we objected 2 to the decarbonization benefit being used. And so then, 3 in response to that, they took that out and told us what 4 our cost-benefit would be without it. And it was still 5 higher than the one threshold. Significantly higher. 6 ADAM RENFANDT: Yeah. And it -- there's very 7 little benefit that's derived from this decarbonization 8 benefit. The BC, the benefit-cost ratio, goes -- when 9 you remove it, goes from 2.8 to 2.6. So that's kind of 10 saying if you spend, like, a dollar, you get \$2.06 back. 11 COMMISSIONER CHRISTMANN: So the two 12 overwhelmingly large factors in the -- in the benefit 13 column for Zone 1 are, one, congestion and fuel savings, 14 two, avoided capital cost of local resource investment; 15 correct? 16 ADAM RENFANDT: Correct. Yep. 17 COMMISSIONER CHRISTMANN: Okay. For this 18 project, not Tranche 1 but this project, and for North 19 Dakota, not MISO, what are the avoided capital costs of 20 local resource investment that this -- what costs does 21 this avoid? 22 ADAM RENFANDT: So this avoids the building of 23 local generation that would cost more. 24 COMMISSIONER CHRISTMANN: Like the gas plant 25 that we ordered Xcel to build, for example? That's the</p> <p>PAGE 12</p>

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<p>1 only one I can think of.</p> <p>2 COMMISSIONER FEDORCHAK: Again, it's modeled.</p> <p>3 It's not necessary --</p> <p>4 ADAM RENFANDT: Yeah. It's kind -- yeah, it's</p> <p>5 kind of like, you know, when we had the original MVP</p> <p>6 portfolio, we had to -- we could share resources and</p> <p>7 then reduce local overbuild.</p> <p>8 So if we're able to spread that out with</p> <p>9 transmission, then there's a point in which you're</p> <p>10 supposed to hit the sweet spot, and it's called the</p> <p>11 "bathtub curve," right, in which you want to put your</p> <p>12 transmission overlay on your resources such that you're</p> <p>13 all in a sharing pool and you're able to then not build</p> <p>14 something -- not have a grid that's Balkanized such that</p> <p>15 -- or have no wires and we've got to overbuild a ton of</p> <p>16 maybe thermal generation because we couldn't then use a</p> <p>17 renewable source maybe.</p> <p>18 COMMISSIONER CHRISTMANN: So the biggest share</p> <p>19 of our benefits are avoiding costs that we can't</p> <p>20 identify.</p> <p>21 COMMISSIONER FEDORCHAK: Well, that's not --</p> <p>22 their model costs out to 2039. I mean, you have to look</p> <p>23 at the time frame. So -- and that -- these might be</p> <p>24 good questions for -- because MISO should be able to</p> <p>25 identify those things for this project, for that -- for</p> <p>PAGE 13</p>	<p>1 COMMISSIONER CHRISTMANN: Well, he's kind of</p> <p>2 bringing their case.</p> <p>3 COMMISSIONER FEDORCHAK: He's been trying so</p> <p>4 that we can, yeah, understand.</p> <p>5 COMMISSIONER HAUGEN-HOFFART: And I guess that</p> <p>6 was my question in looking at some of this, is how much</p> <p>7 of this, I mean, gets updated as things go on? Like</p> <p>8 Randy brought up Applied Digital. I mean, how is that</p> <p>9 fed into MISO and updated so we have current -- more</p> <p>10 current information? I mean --</p> <p>11 COMMISSIONER FEDORCHAK: Once these projects are</p> <p>12 approved, they don't go back and update all this. Like</p> <p>13 this was agreed on and approved by the board a year --</p> <p>14 more than a year ago. So they don't go back --</p> <p>15 COMMISSIONER HAUGEN-HOFFART: Okay.</p> <p>16 COMMISSIONER FEDORCHAK: -- and keep changing</p> <p>17 these.</p> <p>18 COMMISSIONER HAUGEN-HOFFART: Okay.</p> <p>19 COMMISSIONER FEDORCHAK: -- and re-justifying</p> <p>20 the case or changing the case.</p> <p>21 COMMISSIONER HAUGEN-HOFFART: Well, I wouldn't</p> <p>22 have to say "re-justify" but just more accurate data</p> <p>23 that we as PUCs could have. Like when we -- when the --</p> <p>24 when the Tranche 1, when this case comes before us, we</p> <p>25 have more information, but lesson learned.</p> <p>PAGE 15</p>
<p>1 actually this line or those two lines. So that's</p> <p>2 probably a question we could ask them for -- to address.</p> <p>3 And I think it's an important one to understand, you</p> <p>4 know, how all this stuff is pulled together.</p> <p>5 COMMISSIONER CHRISTMANN: The other one that is</p> <p>6 very significant in that is the congestion and fuel</p> <p>7 savings. And so I think any of us that have, in recent</p> <p>8 years, watched LMP prices have seen the congestion</p> <p>9 that's over in that area; correct?</p> <p>10 ADAM RENFANDT: Yep.</p> <p>11 COMMISSIONER CHRISTMANN: And this study was</p> <p>12 approved in 2022 so it was done well before Applied</p> <p>13 Digital was even discussed. Because the -- my own just</p> <p>14 occasional but pretty frequent viewing of LMP prices,</p> <p>15 I've seen the heat map. I'm seeing a lot less</p> <p>16 congestion problems over there. And we've only got the</p> <p>17 first phase of Applied Digital going. So I don't know</p> <p>18 that these congestion benefits are really there for us</p> <p>19 anymore.</p> <p>20 COMMISSIONER FEDORCHAK: They might not be.</p> <p>21 It's a fair question. And, also, Adam's not defending</p> <p>22 MISO.</p> <p>23 COMMISSIONER CHRISTMANN: I know.</p> <p>24 (Laughter)</p> <p>25 COMMISSIONER FEDORCHAK: Adam is not MISO so...</p> <p>PAGE 14</p>	<p>1 COMMISSIONER FEDORCHAK: And we don't ever see</p> <p>2 all of Tranche 1.</p> <p>3 COMMISSIONER HAUGEN-HOFFART: Right.</p> <p>4 COMMISSIONER FEDORCHAK: This is the only line</p> <p>5 we'll see.</p> <p>6 COMMISSIONER HAUGEN-HOFFART: Right. But things</p> <p>7 have changed since then. I mean -- point taken.</p> <p>8 COMMISSIONER FEDORCHAK: Yeah. We should -- we</p> <p>9 could ask MISO for them to provide us that for this -- I</p> <p>10 don't know if they've got it at that granular level or</p> <p>11 not.</p> <p>12 ADAM RENFANDT: To provide?</p> <p>13 COMMISSIONER FEDORCHAK: The congestion fuel</p> <p>14 savings, avoided capital costs of local investment --</p> <p>15 well, even all the benefit metrics, if they can, for --</p> <p>16 for Zone 1 for just --</p> <p>17 ADAM RENFANDT: Just --</p> <p>18 COMMISSIONER FEDORCHAK: -- Jamestown to</p> <p>19 Ellendale.</p> <p>20 ADAM RENFANDT: Yeah, okay.</p> <p>21 COMMISSIONER HAUGEN-HOFFART: Or could MDU? I'm</p> <p>22 sorry, but could MDU provide us any of that?</p> <p>23 COMMISSIONER FEDORCHAK: I doubt it. They don't</p> <p>24 run the models.</p> <p>25 ADAM RENFANDT: Yeah, they wouldn't have access</p> <p>PAGE 16</p>



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<p>1 to that level of information and detail that MISO --</p> <p>2 COMMISSIONER HAUGEN-HOFFART: I got my answer.</p> <p>3 COMMISSIONER FEDORCHAK: And the thing is, the</p> <p>4 other thing to remember, and this is just a part of the</p> <p>5 reality of MISO, is if you look at the size of our zone,</p> <p>6 I mean there's a lot of what's happening in Minnesota</p> <p>7 and part of Wisconsin driving Zone 1. And that's --</p> <p>8 that's the reality for us in North Dakota and MISO.</p> <p>9 Zone 1 includes all of Minnesota and a chunk of</p> <p>10 Wisconsin.</p> <p>11 VICTOR SCHOCK: So -- especially on the fuel</p> <p>12 cost savings, it's one -- because both RTOs do that kind</p> <p>13 of comparison when they run modeling. And it's one</p> <p>14 thing I've really struggled with in our zone. Usually</p> <p>15 we have trapped generation that can't get out. And when</p> <p>16 they do their model, well, this zone or this area is</p> <p>17 going to benefit by that trap generation getting out.</p> <p>18 Well, I suppose the zone as a whole is going to benefit,</p> <p>19 but our prices go up as a result of it.</p> <p>20 COMMISSIONER FEDORCHAK: Right.</p> <p>21 VICTOR SCHOCK: So that negative -- that</p> <p>22 negative congestion that's happening down there changes</p> <p>23 to even keel with the rest of the system. And primarily</p> <p>24 in this instance, I think Minnesota's prices probably go</p> <p>25 down a slight bit --</p> <p>PAGE 17</p>	<p>1 know how the -- where or how the battle would occur,</p> <p>2 but, okay, if the issue is somebody else out of state's</p> <p>3 need for energy and some developer that wants to come in</p> <p>4 and set up some more wind farms here, fine, pay for it.</p> <p>5 Not our ratepayers all the time.</p> <p>6 And so, yes, the RTO forces this cost allocation</p> <p>7 on us, but if we don't fight for it -- or fight against</p> <p>8 it successfully, guess what? We're going to be paying</p> <p>9 for -- was it three that's all south so maybe not that</p> <p>10 -- maybe not one of them, but we're going to be paying</p> <p>11 for all the rest of them too. And when better than now</p> <p>12 to fight it?</p> <p>13 COMMISSIONER FEDORCHAK: I don't disagree. And</p> <p>14 we did fight it. But we --</p> <p>15 COMMISSIONER CHRISTMANN: MISO.</p> <p>16 COMMISSIONER FEDORCHAK: At MISO, yeah.</p> <p>17 COMMISSIONER CHRISTMANN: I'm talking about at</p> <p>18 FERC.</p> <p>19 COMMISSIONER HAUGEN-HOFFART: So is that how it</p> <p>20 would play out, I mean, going off of that? Tell me --</p> <p>21 COMMISSIONER FEDORCHAK: Yeah, I don't know.</p> <p>22 COMMISSIONER HAUGEN-HOFFART: Can you walk me --</p> <p>23 well, first of all, does anybody have anything else,</p> <p>24 Chris or Adam, to add to these?</p> <p>25 CHRIS HANSON: Just a scale -- sorry. I was</p> <p>PAGE 19</p>
<p>1 COMMISSIONER FEDORCHAK: Yep.</p> <p>2 VICTOR SCHOCK: -- while ours go up to what the</p> <p>3 rest of the zone is seeing.</p> <p>4 COMMISSIONER CHRISTMANN: And this is kind of</p> <p>5 one of my concerns here, is so our ratepayers pay to</p> <p>6 build this and the benefits are looked at, well, is this</p> <p>7 investment here some big benefit, but it's mostly to</p> <p>8 whoever the new developer is that comes in and builds</p> <p>9 another wind farm. A few landowners but not to most of</p> <p>10 these Otter Tail and MDU customers. And I'm just -- I'm</p> <p>11 not seeing nearly the benefits or congestion</p> <p>12 improvements as what this seems to want to indicate.</p> <p>13 COMMISSIONER FEDORCHAK: Well, the other issue</p> <p>14 that I think is -- two other issues that are relevant</p> <p>15 are the reliability savings or reliability impacts and</p> <p>16 are the access for our broader generation to get out. I</p> <p>17 mean, if there's congestion, there's generators in North</p> <p>18 Dakota that are being curtailed. And depending on</p> <p>19 price, you know, that hurts them. And, you know, the</p> <p>20 higher-price ones are the ones probably being curtailed</p> <p>21 first. So that's -- that's another North Dakota issue.</p> <p>22 COMMISSIONER CHRISTMANN: You know, I guess it's</p> <p>23 a separate argument of whether this is the right time to</p> <p>24 have the battle, but therein lies a lot of the reason</p> <p>25 for me wanting to take on the battle, and I don't even</p> <p>PAGE 18</p>	<p>1 just going to add that the scale of Tranche 1, the</p> <p>2 numbers that we got from MDU and from Otter Tail were</p> <p>3 like 10 and a half billion or somewhere between 10 and</p> <p>4 10 and a half billion, and the cost per megawatt-hour</p> <p>5 that they were estimating in 2031, which was the max</p> <p>6 rate, was about \$2.54 per megawatt. So -- so -- or</p> <p>7 megawatt-hour. So just as kind of a -- as a scale.</p> <p>8 Now that -- how that impacts, say, residential</p> <p>9 customers is going to depend upon the company. Because</p> <p>10 each of the companies has their own allocation</p> <p>11 methodology for transmission costs. But just to kind of</p> <p>12 give you an average on things, the Tranche 1, on</p> <p>13 average, would be about, you know, \$2.54 per</p> <p>14 megawatt-hour.</p> <p>15 So I'll throw -- NSP, as an example, does a</p> <p>16 direct allocation per megawatt-hour so that would affect</p> <p>17 their customers by \$2.54 per month for a thousand</p> <p>18 kilowatts or 1 megawatt of use -- or megawatt-hour of</p> <p>19 usage per month.</p> <p>20 But then we talked about Tranche 2, 3, 4. You</p> <p>21 know, as you're getting up into that 50 billion range,</p> <p>22 then, you know, you're talking 10, \$15 per megawatt-hour</p> <p>23 as a relative scale.</p> <p>24 COMMISSIONER CHRISTMANN: Okay. Then I need to</p> <p>25 be corrected here and find out where I'm wrong. When we</p> <p>PAGE 20</p>

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<p>1 had our --</p> <p>2 COMMISSIONER HAUGEN-HOFFART: Informal?</p> <p>3 COMMISSIONER CHRISTMANN: -- informal on</p> <p>4 July 8th, I didn't write down \$2.54 a month. I wrote</p> <p>5 \$3.15 a month for --</p> <p>6 CHRIS HANSON: Yep.</p> <p>7 COMMISSIONER CHRISTMANN: -- MDU and 5.85 for --</p> <p>8 CHRIS HANSON: Correct.</p> <p>9 COMMISSIONER CHRISTMANN: -- Otter Tail.</p> <p>10 CHRIS HANSON: Correct. So as I said, MDU and</p> <p>11 Otter Tail have an allocation methodology that's</p> <p>12 different for residential and for commercial,</p> <p>13 industrial. I'll use NSP as an example because they do</p> <p>14 a per-megawatt-hour allocation so it's a straight --</p> <p>15 COMMISSIONER CHRISTMANN: Oh.</p> <p>16 CHRIS HANSON: It's a different methodology but</p> <p>17 it's -- it's, I guess you could say, cleaner. But the</p> <p>18 average that MISO was allocating, their number was \$2.54</p> <p>19 based upon their estimates at the peak in 2031 when all</p> <p>20 the projects are up and running before they start to</p> <p>21 amortize off.</p> <p>22 So, yes, you are correct. Like MDU's number,</p> <p>23 MDU's number was \$3.15. The memo that I had was 5.75.</p> <p>24 And I think Matt Olsen came back and amended that to</p> <p>25 5.85 per megawatt-hour. So that's because they used</p> <p>PAGE 21</p>	<p>1 COMMISSIONER FEDORCHAK: Sure.</p> <p>2 COMMISSIONER CHRISTMANN: I mean if -- if it</p> <p>3 went to court and the courts backed the Commission on a</p> <p>4 denial -- or, no, overturned the Commission on a denial,</p> <p>5 well, then it would move forward unless we appealed.</p> <p>6 But let's say they backed our decision on a denial,</p> <p>7 wouldn't at some point this get to be a FERC thing over</p> <p>8 whether the states can stop -- and this could be SPP</p> <p>9 too -- stop RTO-approved projects through their PC&amp;N</p> <p>10 process? Isn't that something that is going to have to</p> <p>11 get determined at some point? Or are they just all</p> <p>12 going to go to load pays?</p> <p>13 UNIDENTIFIED SPEAKER: So I'm guessing the issue</p> <p>14 that you're presenting is an interstate commerce issue</p> <p>15 from the discussion that you're providing. And I'd be</p> <p>16 happy to have some additional discussion with that, but</p> <p>17 I probably would not want to be having that in -- in</p> <p>18 open meeting without having an opportunity to review the</p> <p>19 tariffs that we're discussing.</p> <p>20 COMMISSIONER CHRISTMANN: So we've kind of</p> <p>21 touched on these, but I want to re-emphasize two points.</p> <p>22 One is, yes, we can talk about avoiding congestion or</p> <p>23 avoiding additional investment costs. I haven't found</p> <p>24 any basis for those other than someone who likes doing</p> <p>25 projects, putting numbers together, I -- I can't see</p> <p>PAGE 23</p>
<p>1 different methodology for allocating those transmission</p> <p>2 costs. So you are correct.</p> <p>3 COMMISSIONER FEDORCHAK: Okay. So I -- and</p> <p>4 Randy raised a good question about how, if we deny this,</p> <p>5 say, what is the result? Where does it go? Or do the</p> <p>6 companies -- where can the companies protest? Or MISO,</p> <p>7 I guess.</p> <p>8 UNIDENTIFIED SPEAKER: Well, I'm still getting</p> <p>9 acquainted with this case. And I know you guys asked me</p> <p>10 to come in here and have some discussion, but if we have</p> <p>11 -- we issue an order with the denial, obviously it</p> <p>12 depends on the basis of the denial and it depends on the</p> <p>13 basis of the challenge. It could either be in Federal</p> <p>14 District Court or it could be in State Court. And so it</p> <p>15 would be up to the issue that really is being appealed.</p> <p>16 COMMISSIONER FEDORCHAK: So the -- Otter Tail or</p> <p>17 MDU would likely then decide to take it -- it could.</p> <p>18 UNIDENTIFIED SPEAKER: It would likely be Otter</p> <p>19 Tail or MDU.</p> <p>20 COMMISSIONER CHRISTMANN: Or MISO.</p> <p>21 COMMISSIONER FEDORCHAK: Could MISO? Do they</p> <p>22 have any --</p> <p>23 UNIDENTIFIED SPEAKER: Again, depending on the</p> <p>24 issue and where it's at.</p> <p>25 COMMISSIONER CHRISTMANN: Well, let's say --</p> <p>PAGE 22</p>	<p>1 anything.</p> <p>2 I will point out, though, that among the project</p> <p>3 benefits are to accommodate new electric generation</p> <p>4 projects. That, to me, that's who ought to be paying at</p> <p>5 least a good part of this, if not all of it. Because</p> <p>6 that, to me, is the key benefit in this, is to add the</p> <p>7 new generators. And to the extent that's for</p> <p>8 decarbonization or to meet other states' policy goals,</p> <p>9 regardless. The point is to add that generation. And I</p> <p>10 think that is the key benefit that this is looking to</p> <p>11 solve.</p> <p>12 The other, though, has to do with reliability</p> <p>13 and our discussion. This isn't in, like, the</p> <p>14 presentation, I don't think, but I'm using my</p> <p>15 recollection. Correct me if it's wrong. The real</p> <p>16 reliability issue in North Dakota that was highlighted</p> <p>17 as an example that this could take care of was the very</p> <p>18 near miss at Jamestown.</p> <p>19 And I think it's been said before, but kudos</p> <p>20 again to Otter Tail for still hanging on to that old</p> <p>21 generator in town there that almost never gets used and</p> <p>22 being able to keep Jamestown going as they did.</p> <p>23 But as this plays out in my mind, this project,</p> <p>24 what I have heard was, if I were to add all the new</p> <p>25 generation, it generally flows from that -- like the</p> <p>PAGE 24</p>

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<p>1 Ellendale point down through South Dakota and Minnesota 2 and out, but if there's problems there, they need this 3 alternative route to get it up to Jamestown and then 4 from there on it can flow through Fargo and away. 5       Okay. If -- as far as to add the new 6 generation, I guess that makes sense. It also tells me 7 there's plenty of capacity in the transmission lines 8 between Jamestown and Fargo for all this to flow that 9 way, which tells me when Xcel builds their gas plant 10 there, it can flow the other way and that can just as 11 easily be used to help solve any potential energy 12 shortfalls in Jamestown. 13       And so I think the one investment that I can see 14 that this is going to eliminate the need for is that 15 generation plant. And I guess it's fine as long as 16 we're willing to have service when it's windy but not 17 when it's not. I don't think most of the people are. 18       COMMISSIONER FEDORCHAK: Randy, did you review 19 the project benefits identified in the companies' 20 application? 21       COMMISSIONER CHRISTMANN: I have, but it's been 22 a while and I don't know if I have -- 23       COMMISSIONER FEDORCHAK: How did we -- we had an 24 informal, right -- 25       COMMISSIONER HAUGEN-HOFFART: Yeah.</p> <p>PAGE 25</p>	<p>1 excessive thermal loadings for N-1 contingencies and 70 2 elements with excessive loading, and then down below the 3 project improves voltages in the Red River Valley by 4 relieving 97 voltage violations and 91 voltage 5 violations for N-1-1 contingencies, like how many of 6 those are North Dakota customers? How much of that is 7 -- how much of that is a North Dakota issue? 8       I mean, I am -- I want to know -- I would have 9 to be reminded of that. I'd have to have a more 10 technical discussion, I think, with the company to 11 understand the implications for our customers of not 12 having this line. 13       VICTOR SCHOCK: Isn't N-1 what drives congestion 14 pricing? 15       COMMISSIONER FEDORCHAK: I don't -- 16 Adam? 17       ADAM RENFANDT: If it's overloaded, so if it's 18 overloaded, it could be overloaded for a number of 19 reasons. You know, an outage definitely is it. I mean, 20 that creates congestion such that, if you can't -- if 21 you can't have -- if you can't fire up or move electrons 22 from point A to point B and then you might have to go 23 and fire up a more expensive peaker, for instance, if 24 you've got a line outage, for instance. 25       VICTOR SCHOCK: Right.</p> <p>PAGE 27</p>
<p>1       COMMISSIONER FEDORCHAK: -- on this? That's how 2 we -- 3       COMMISSIONER CHRISTMANN: Was that presented 4 then or was that in the case earlier? 5       COMMISSIONER HAUGEN-HOFFART: Well, it's -- 6 both. 7       COMMISSIONER FEDORCHAK: Both. 8       COMMISSIONER HAUGEN-HOFFART: It's in their 9 application and the -- 10       COMMISSIONER CHRISTMANN: What you're looking 11 at, though -- 12       COMMISSIONER FEDORCHAK: This is their 13 application. 14       COMMISSIONER CHRISTMANN: -- this. 15       COMMISSIONER FEDORCHAK: Right. 16       COMMISSIONER CHRISTMANN: Okay. 17       COMMISSIONER FEDORCHAK: This is the 18 application. 19       COMMISSIONER CHRISTMANN: What page? 20       COMMISSIONER FEDORCHAK: 11. And to some extent 21 page 9 is the project need. 22       COMMISSIONER CHRISTMANN: Okay. 23       COMMISSIONER FEDORCHAK: I just don't know when 24 they -- when all these problems, these reliability 25 problems, like at 40 transmission elements with</p> <p>PAGE 26</p>	<p>1       ADAM RENFANDT: Or something like that, yeah. 2       VICTOR SCHOCK: But congestion pricing -- and 3 this is, I think, the case in both RTOs. It isn't 4 because the lines that are in operation at that moment 5 can't handle the load that's going across them. It's in 6 the event of a loss of your biggest element -- 7       ADAM RENFANDT: Uh-huh. 8       VICTOR SCHOCK: -- the remaining system isn't 9 able to pick that load up without tripping. 10       ADAM RENFANDT: It doesn't have to be -- like 11 you can get congestion if it just -- if it -- in the 12 event that it would -- if in the event that you had an 13 outage. 14       VICTOR SCHOCK: Right. 15       ADAM RENFANDT: In that case, yeah, then -- 16 yeah, then you -- but you're not actually in an outage. 17       VICTOR SCHOCK: Right. No, I absolutely agree 18 that you're not in an outage, but the pricing for 19 congestion, I think, is based on that N-1 scenario. 20       ADAM RENFANDT: Yeah, that's how the grid 21 operates. Yeah. Yep. 22       VICTOR SCHOCK: So all that is to say I think 23 that's a good portion of what they're speaking to in the 24 40 elements with excessive loading for the first 25 transmission element loss.</p> <p>PAGE 28</p>

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<p>1 ADAM RENFANDT: Yeah, yeah, that's --</p> <p>2 VICTOR SCHOCK: I think that's largely</p> <p>3 congestion.</p> <p>4 I don't know if that -- does that make some</p> <p>5 sense?</p> <p>6 COMMISSIONER FEDORCHAK: And so?</p> <p>7 VICTOR SCHOCK: I'm not drawing any conclusions</p> <p>8 from that. It was just that you started to kind of talk</p> <p>9 about it a little bit and I -- I don't know that that's</p> <p>10 the entire answer --</p> <p>11 COMMISSIONER FEDORCHAK: So the benefits of</p> <p>12 relieving that are -- it's not a reliability concern.</p> <p>13 VICTOR SCHOCK: Not -- I'm not even saying that</p> <p>14 definitively. I think your question was what those 40</p> <p>15 elements are. And I think probably a good chunk of them</p> <p>16 are probably that N-1 scenario where overloading --</p> <p>17 COMMISSIONER FEDORCHAK: Well, no. I'll put it</p> <p>18 a lot more simply.</p> <p>19 VICTOR SCHOCK: Okay.</p> <p>20 COMMISSIONER FEDORCHAK: That's a lot of</p> <p>21 technical mumbo jumbo. What I want to know is how does</p> <p>22 this matter to North Dakota customers?</p> <p>23 VICTOR SCHOCK: Sure.</p> <p>24 COMMISSIONER FEDORCHAK: Does it? Or is it just</p> <p>25 a bunch of sentences to make it seem like, "Jeez, that</p> <p>PAGE 29</p>	<p>1 applied to all of Zone 1, but of that -- of these</p> <p>2 issues, how many -- how much of the issue applied to</p> <p>3 North Dakota specifically?" So we're kind of getting</p> <p>4 lumped in with the whole zone.</p> <p>5 COMMISSIONER FEDORCHAK: Right.</p> <p>6 UNIDENTIFIED SPEAKER: And this is the issue to</p> <p>7 the whole zone, but how much of it applies specifically</p> <p>8 to us?</p> <p>9 COMMISSIONER FEDORCHAK: Yeah. And what is the</p> <p>10 impact of this? Is it a price issue? Is it -- is it a</p> <p>11 lot -- you know, we can't get power at certain times?</p> <p>12 It's hurting the lines? Like what is the actual -- what</p> <p>13 are the issues that it's causing?</p> <p>14 Yeah, and same -- I mean, the company might have</p> <p>15 a -- probably MISO needs to get us more specifics of the</p> <p>16 impacts of this project on the benefit metrics that</p> <p>17 they've used here. And if they can get those for North</p> <p>18 Dakota versus all of Zone 1, that would be helpful too.</p> <p>19 COMMISSIONER CHRISTMANN: You know, when -- when</p> <p>20 it's simplified down, when -- and I don't know who was</p> <p>21 speaking at the time, I presume Otter Tail because it</p> <p>22 was about Jamestown, but between the two when we had the</p> <p>23 informal, when they talked about that situation in</p> <p>24 Jamestown that I referenced earlier, okay, yeah, that is</p> <p>25 something that happened, aware of it, it made a good</p> <p>PAGE 31</p>
<p>1 sounds bad, we better approve this"? Right?</p> <p>2 VICTOR SCHOCK: Yeah.</p> <p>3 COMMISSIONER FEDORCHAK: So I don't know.</p> <p>4 Maybe --</p> <p>5 VICTOR SCHOCK: Sure.</p> <p>6 COMMISSIONER FEDORCHAK: -- it is a bunch --</p> <p>7 maybe it is a big problem for North Dakota customers,</p> <p>8 maybe it isn't. I don't -- I can't tell by this, and I</p> <p>9 don't recall exploring that deeply in our informal with</p> <p>10 them. So I would want to know that so we don't -- you</p> <p>11 know, so I can have that information --</p> <p>12 VICTOR SCHOCK: Yep.</p> <p>13 COMMISSIONER FEDORCHAK: -- in making my</p> <p>14 decision anyway.</p> <p>15 VICTOR SCHOCK: Do you want to know that from</p> <p>16 the company or from MISO?</p> <p>17 COMMISSIONER HAUGEN-HOFFART: The company.</p> <p>18 COMMISSIONER FEDORCHAK: The company.</p> <p>19 COMMISSIONER HAUGEN-HOFFART: It's in their</p> <p>20 application.</p> <p>21 UNIDENTIFIED SPEAKER: So just for clarification</p> <p>22 on that, they're basically saying when they analyze this</p> <p>23 solution, they're kind of looking at it in conjunction</p> <p>24 with the Big Stone, Alexandria, the other projects on</p> <p>25 Zone 1. So you're saying, "Okay, well, I get that this</p> <p>PAGE 30</p>	<p>1 case in point to me, I was thinking, okay, now I'm</p> <p>2 seeing some benefit here until, like I say, then I</p> <p>3 thought more about it, except for, supposedly, within a</p> <p>4 little over a year or -- things usually run late, but in</p> <p>5 the relatively near term we had a new gas plant go in</p> <p>6 Fargo. That should be able to do it. I guess when they</p> <p>7 just say, "Oh, well, there's all these benefits," it's</p> <p>8 not very persuasive to me.</p> <p>9 COMMISSIONER FEDORCHAK: Uh-huh.</p> <p>10 COMMISSIONER CHRISTMANN: Tell me what they are,</p> <p>11 where the shortages are, what can't we do. And we'll</p> <p>12 see once -- whether it seems it to me that -- or it</p> <p>13 seems to us as a group, as a body, whether those</p> <p>14 benefits then are primarily going to the ratepayers that</p> <p>15 are being asked to pay for this or to somebody else.</p> <p>16 COMMISSIONER FEDORCHAK: Yep. Good questions.</p> <p>17 As you said, like, we tried in the cost allocation</p> <p>18 discussion to make these points. They weren't -- they</p> <p>19 didn't win the day. This is our next -- this is our</p> <p>20 next tool to try to address them.</p> <p>21 COMMISSIONER CHRISTMANN: And while we're on</p> <p>22 this, I -- a legal question -- oh, did you have</p> <p>23 something else?</p> <p>24 COMMISSIONER FEDORCHAK: Well, I just -- but I'm</p> <p>25 not -- I'm also -- you know, I definitely -- I'm not</p> <p>PAGE 32</p>

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<p>1 sure that this doesn't have just merits for North Dakota</p> <p>2 on -- on a technical side so I'm not, like -- I'm very</p> <p>3 open to hearing what the benefits are to our customers</p> <p>4 because I -- I think that there are -- and to our</p> <p>5 generators, I guess. I'd like to evaluate -- be</p> <p>6 evaluating that along with it. So...</p> <p>7 COMMISSIONER CHRISTMANN: I think you got it</p> <p>8 covered.</p> <p>9 VICTOR SCHOCK: So to clarify -- clarify what I</p> <p>10 think I heard, so we're going to get a response from</p> <p>11 MISO on the benefit metrics for Zone 1 on this line</p> <p>12 specifically. So I think if Adam can reach out, that's</p> <p>13 probably the most efficient.</p> <p>14 And then whatever response you get, if you want</p> <p>15 to pass that through Chris.</p> <p>16 And then, Chris, if you can work with Otter Tail</p> <p>17 and MDU on a response for what these elements savings</p> <p>18 and benefits are. And then, you know, if it's</p> <p>19 reliability benefit, how and what circumstance?</p> <p>20 And we'll get all of that submitted into a</p> <p>21 couple of docket entries, hopefully, rather than just</p> <p>22 some emails flying around. And --</p> <p>23 COMMISSIONER CHRISTMANN: And, you know, yes, I</p> <p>24 know these things take time, but there's a reason why</p> <p>25 they take time, so people don't make bad decisions. But</p> <p>PAGE 33</p>	<p>1 there. There's a bunch more -- how many more wind farms</p> <p>2 did they model being developed in the eastern part of</p> <p>3 North Dakota that will drive congestion up again? And</p> <p>4 those were driven by -- probably by Minnesota</p> <p>5 environmental goals and others but -- yeah.</p> <p>6 UNIDENTIFIED SPEAKER: Yeah.</p> <p>7 COMMISSIONER FEDORCHAK: That would be helpful</p> <p>8 to know, what kind of generation they modeled in that</p> <p>9 area --</p> <p>10 UNIDENTIFIED SPEAKER: And where.</p> <p>11 COMMISSIONER FEDORCHAK: -- for this.</p> <p>12 UNIDENTIFIED SPEAKER: Yeah, we can -- we can</p> <p>13 get that.</p> <p>14 COMMISSIONER HAUGEN-HOFFART: And I think</p> <p>15 separately, I mean we're going to work with Jack as far</p> <p>16 as maybe some next steps --</p> <p>17 UNIDENTIFIED SPEAKER: Sure.</p> <p>18 COMMISSIONER HAUGEN-HOFFART: -- if denied just</p> <p>19 for an understanding as far as litigation.</p> <p>20 UNIDENTIFIED SPEAKER: Be happy to have that</p> <p>21 discussion. I would note as well, though, after we</p> <p>22 receive all the documents, all the information that's</p> <p>23 necessary, it may be worth considering appointing</p> <p>24 advocacy staff if we need to flush out certain issues a</p> <p>25 little better and maybe have a formal hearing on it as</p> <p>PAGE 35</p>
<p>1 it seems like as far as the -- anything having to do</p> <p>2 with congestion in that area of the state, this should</p> <p>3 be recalculated based on Applied Digital's second phase</p> <p>4 being in effect. Because I understand they're pretty</p> <p>5 far along with it already and the first phase is already</p> <p>6 going. And, like I say, from my just viewing of heat</p> <p>7 maps, it's having quite an impact. So maybe I'm wrong</p> <p>8 about that, but it doesn't appear that way to me.</p> <p>9 COMMISSIONER HAUGEN-HOFFART: But it's a good</p> <p>10 point to evaluate.</p> <p>11 COMMISSIONER FEDORCHAK: Yeah. And then maybe</p> <p>12 they can provide information about what other additional</p> <p>13 generation they've cited there in their long-range</p> <p>14 transmission planning that drove the need for these</p> <p>15 lines. Because it isn't just what exists today. It's</p> <p>16 much more what they modeled to becoming. So, you know,</p> <p>17 that -- that is part of this equation so they should</p> <p>18 explain that.</p> <p>19 UNIDENTIFIED SPEAKER: The generation that --</p> <p>20 that showed up?</p> <p>21 COMMISSIONER FEDORCHAK: Where they -- yeah.</p> <p>22 That's going to -- you know, it isn't just --</p> <p>23 COMMISSIONER HAUGEN-HOFFART: Planning.</p> <p>24 COMMISSIONER FEDORCHAK: -- well, we took care</p> <p>25 of the congestion now because we've got Applied Digital</p> <p>PAGE 34</p>	<p>1 well.</p> <p>2 COMMISSIONER FEDORCHAK: Yeah. That's a good</p> <p>3 point. I'd be open to that, because I really do want to</p> <p>4 understand the companies' side of it and the benefits</p> <p>5 that they are seeing.</p> <p>6 COMMISSIONER CHRISTMANN: Anything else?</p> <p>7 COMMISSIONER HAUGEN-HOFFART: No. I think this</p> <p>8 was -- first of all, I want to say thanks to everyone</p> <p>9 for getting this lined up so quickly on the work</p> <p>10 session. And, no, I have nothing further. I look</p> <p>11 forward to the additional information to receive to</p> <p>12 evaluate.</p> <p>13 COMMISSIONER CHRISTMANN: Okay. With that,</p> <p>14 thanks, everybody, and this work session is concluded.</p> <p>15 -----</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p> <p>PAGE 36</p>

# Otter Tail Power Co./MDU Co. 345kV Line, Case No. PU-24-91

August 19, 2024, Work session

## ND PUBLIC SERVICE COMMISSION

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I further certify that I am not a relative or employee or attorney or counsel of any of the parties hereto, nor a relative or employee of such attorney or counsel; nor do I have any interest in the outcome or events of the action.

Dated this date of September 8, 2025.

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# Otter Tail Power Co./MDU Co. 345kV Line, Case No. PU-24-91

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# Otter Tail Power Co./MDU Co. 345kV Line, Case No. PU-24-91

## August 19, 2024, Work session ND PUBLIC SERVICE COMMISSION

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