EXHIBIT 6

PSC Work Session – July 8, 2024

0:00:00
(Speaker Christmann)
Good afternoon. This is an informal hearing on a case that is a combinational case, Otter Tail Power and MDU. And it's a certificate of public convenience and necessity request regarding the Jamestown to Ellendale transmission line. It is case number PU-24-91. It's **July 8th, 2024** at 1:32 p.m. I'm Randy Christmann, Chair of the Commission, joined by Commissioner Sherry Haugen-Hoffart. You're in the room with me and Commissioner Fedorchak is on the phone and I believe in transit. I didn't have any opening comments that Commissioner Haugen-Hoffart, well Commissioner Fedorchak did you have any opening comments?

(Speaker Fedorchak) I don't, nope thank you.

(Speaker Christman) Okay so I'll save yours and combine. I want to emphasize this is an informal hearing so it involves only undisputed facts. If anything comes up that is disputed, we will have to stop the informal and proceed to scheduling a formal case. The applicant goes first, but I'll first turn it over to Commissioner Haugen-Hoffart, who is a portfolio holder, for any opening comments.

0:01:36
(Speaker Haugen-Hoffart)
Okay, well, thanks everyone. I think this is going to be an interesting overview and questions regarding a joint filing. So it's so good to see so many people here. And because Julie is on the phone, before we turn it over to you guys to present, why don't we go around the room and introduce everyone so Julie knows who's going to be presenting but who's also in the room. So I'll go to Brian.

0:02:04 Brian Johnson, PSC staff.

Chris Hansen, PSC staff.
Robert Frank, Montana Dakota.

Allison Walden, representing Montana Dakota.

Jason Weirs, Otter Tail Power Company
Robert Endress, Otter Tail Power Company.
Todd Langston, Otter Tail Power Company.
(Speaker Haugen-Hoffart) Do we want everyone in the back?
(Speaker Christmann) Yeah, please pass the mic back.
Joanne Thompson, Otter Tail Power Company.
Matt Olson, Otter Tail Power Company.
Travis Jacobson, Montana, Dakota.
Darcy Nygum, Montana, Dakota.
Mark Hanson, Montana, Dakota.
Adam Rinsen, staff.

Victor Shook, PSC staff.
Claire Vigessa, North Dakota Transmission Authority.

0:02:54
(Speaker Haugen-Hoffart)
Well, thank you everyone for the introductions. My only question is, as you go through the PowerPoint, do you want us to ask questions at that time or do you want questions held until the end?

0:03:21
(Speaker 2 Jason Weirs) Please interrupt with questions along the way.

(Speaker Haugen-Hoffart) Okay, so we will turn it over to you guys for your presentation.

(Speaker Robert Endres)
Thank You Commissioner, Robert Endres appearing on behalf of Otter Tail Power Company. Today, Jason Weirs will be our main presenter and main responder to questions, but of course we have the full Otter Tail and MDU complement here to help with answers.

(Speaker Haugen-Hoffart). Okay.

0:03:59
(Speaker Weirs)
All right. Good afternoon, everybody, and thanks again for the opportunity to be here today to talk about Otter Tail and Montana Dakota's joint petition for a certificate of public convenience (CUP) and necessity for the Jamestown to Ellendale 345 KV project. Today's presentation is going to start with a brief overview of the applicants. We'll then cover the project description, the need for the project, benefits of the project, and the alternatives considered to the project. We will then explain how the project fits into MISO's long-range transmission plan and why it was classified as a multi-value project.

0:04:35
(Speaker Weirs)
We'll next review the project schedule and wrap up with a review of the CPCN requirements in the North Dakota Century Code and our conclusions that support granting a certificate of public convenience and necessity for the JETx project.

0:04:53
(Speaker Weirs)
So as mentioned earlier, the applicants in this case are Otter Tail Power Company and Montana Dakota Utilities. Otter Tail and Montana Dakota will co-own the Jamestown to Ellendale project. As you look back on Otter Tail and Montana Dakota's history, you'll note that we have over 200 years of combined experience in serving customers in North Dakota. Over this time frame, we've built an extensive network

0:05:17
(Speaker Weirs)
of transmission and generation facilities. And currently, Otter Tail owns about 6,000 miles of transmission and about 1,100 megawatts of generation, while Montana Dakota Utilities owns about 3,400 miles of transmission and about 700 megawatts of generation. Otter Tail and Montana Dakota have been

0:05:37
(Speaker Weirs)
long-standing business partners for many, many years, dating back to the 1970s when we first partnered in building the Big Stone plant. In the 1980s, that partnership continued in partnering to build the Coyote Station, and most recently, we partnered in building the Big Stone South to Ellendale 345 kV transmission project between 2011 and 2019. These past successes on these previous projects, along with our articles of incorporation and our continued certificates of good standing that are on file with the commission, prove that we are fit, willing, and able to construct, own, and operate the Jamestown to Ellendale project.

0:06:21
(Speaker Weirs)
MISO approved the Jamestown to Ellendale 345 kV project with five distinct facilities. These five distinct facilities are shown here on the slide. The first facility is a new 345 kV double circuit transmission line. The project is expected to be between 85 and 95 miles in length and traverse the counties of Stutsman County, LaMoure County, and Dickey County. The line will be co-owned between Otter Tail and Montana Dakota Utilities. The next facility approved by MISO was the Jamestown substation expansion.

0:06:56
(Speaker Weirs)
This is needed to accommodate the new 345 kV line termination as well as an Ellendale substation expansion that will be needed again to accommodate the new 345 line. The Jamestown substation is currently owned and will continue to be solely owned by Otter Tail, while the Ellendale substation is currently owned and will continue to be solely owned by Montana Dakota. In addition to those core project components, there's also upgrades required at the Maple River substation. This substation is located north of Fargo, and an expansion is needed there, as approved by MISO to accommodate the replacement of two existing 345 230 kV transformers and lastly, there's also a Twin Brooks substation expansion that's been approved by MISO as part of the project. This is located down in South Dakota, just west of Big Stone, and we'll be expanding this substation to accommodate new 345 kV reactors. The Maple River substation is currently solely owned by Otter Tail, and the Twin Brook substation is jointly owned by Otter Tail and Montana Dakota Utilities.

0:08:02
(Speaker Weirs)
The anticipated structures for the project will look very similar to the picture you see on this particular slide, and they will be

constructed with steel model pool self-supporting structures. They will be double circuit capable structures, and we will be installing one circuit initially, but we'll have space for that second circuit in the future when the need arises.

0:08:23
(Speaker Christmann) When you talk about joint ownership of the transmission line part, is it equal or is it a percentage one and a percentage the other?

0:08:31
(Speaker Weirs) Equal ownership rights. So 50% ownership rights.

0:08:37
(Speaker Haugen-Hoffart)
So, meanwhile we're on the joint ownership. So if something goes down, is there like a primary contact, secondary contact? I mean, how does that work as far as doing the expansion work, recovery, whatever?

0:09:00
(Speaker Weirs)
Very good question, Commissioner. We do have a series of agreements that we have executed and are continuing to work on that will actually designate the lead responder in the case of a maintenance need. So those arrangements will be memorialized and documented as part of the ownership arrangements between Otter Tail and MDU.

0:09:22
(Speaker Haugen-Hoffart) OK. So from the onset of doing the expansion work all the way through on maintaining it?

0:09:30
(Speaker Weirs)
Correct. Yup. The average structure height is expected to be 150-feet tall and the structures will be installed on concrete foundations with between four to six structures per mile. The estimated cost for the overall project is $440 million as we've included in our application. The need for the project is driven by reliability concerns that are existing on the 230 kV system in southeastern North Dakota, eastern South Dakota, and west central Minnesota. I've included a graphic here that shows the existing transmission facilities in this part of the region. The existing 230 kV system from Ellendale all the way over to Wahpeton plays an important part today in exporting generation from North Dakota. Today, what happens on the system is an outage of the Big Stone South to Ellendale 345 kV line results in excessive loadings on the existing 230 kV line. This excessive loading also leads to some voltage depressions. After completion of the new 345 kV line from Jamestown to Ellendale, the generation that is forced to flow on that 230 kV system during that Big Stone south to Ellendale outage will now have an alternative path to head north from Ellendale up to Jamestown where it can then jump on the existing 345 kV facilities and make its way towards Fargo. The green dots and the green lines on this map actually represent the facilities that no longer have excessive loadings after we complete the Jamestown to Ellendale project as identified in the studies that have been completed by MISO. And I did get this real handy dandy laser pointer so I could actually show that on the map if I would have been thinking ahead of time, but I can certainly show it now.

0:11:30
(Speaker Weirs)
So the Big Stone South to Ellendale project is this gray line through this part of the system here, and then the existing 230kV system is here from Ellendale heading east to Forman, over to Hankinson, and then up to Wahpeton. So as I was mentioning earlier, in today's system, a loss of the Big Stone South to Ellendale 345 kV line forces the generation coming from North Dakota to have to go down the 230 kV system, which is constrained today. As we look at the future condition of the system and the addition of Jamestown to Ellendale, an outage of Big Stone South to Ellendale will now allow for an alternative transmission path for the generation to flow from Ellendale up to Jamestown, where it will then be able to jump onto the 345 kV line from Jamestown towards Fargo and make its way to the rest of the region.

0:12:25
(Speaker Christmann)
I just want to repeat that back to make sure I understand what we're trying to fix. It's the worry that the Ellendale to Big Stone goes down, forcing everything to go from Ellendale to Hankinson?

0:12:53
(Speaker Weirs) On the existing 230 kV system, correct.

0:12:57
(Speaker Christmann) That's inadequate. So now, if this were constructed, if that Big Stone to Ellendale goes down, it can divert up to Jamestown and go east.

Correct, yep.

(Speaker Haugan Hoffart) And there's plenty of capacity from Jamestown to Fargo to take that on?

0:13:11
(Speaker Weirs)
Yeah. So MISO is studying the system out in 2030, and as they've done the contingency analysis, looking at the various combination of outages that are possible, there were no additional overloads identified as you go from Jamestown towards Fargo. That's correct.

0:13:31
(Speaker Christmann)
What is the flow of most of the energy? But when we say Big Stone to Ellendale, I think of energy that is being created at the Big Stone plant and coming north. But when you were talking, you said the energy produced in North Dakota that's flowing down to Ellendale. And so which is the predominant?

(Speaker Weirs) That's a great question, Commissioner.

0:14:04
(Speaker Christmann) Energy that we're dealing with here?

0:14:05
(Speaker Weirs)
Yep, great question, Commissioner Christmann. Most times during the course of the year, as you look at the generation patterns on the system, there is a predominant flow of energy in this region from west to east. So we are seeing flows from Ellendale to Big Stone South most of the year. And this is especially predominant when we have the off-peak or light load conditions, where we have high generation and low load. We see the bias of flow in the system from west to east, most of the time from Ellendale to Big Stone South.

(Speaker Christmann) And so when we always refer to it out of habit as Big Stone to Ellendale, it's really more the other way around?

0:14:43
(Speaker Weirs) Yeah, and the line can flow either way, as an AC transmission line, but generally speaking, the historical flows have been from Ellendale to Big Stone South.

0:14:55
(Speaker Christmann) Yeah, okay.

0:14:55
(Speaker Weirs)
All right, the Jamestown to Ellendale project will bring several benefits to the local and regional area. As we think about adding a new transmission line like this, we've already talked about the enhanced reliability that the project will bring to the area. Through the course of the MISO analysis, they've identified that this project will relieve excessive loadings on 70 transmission facilities and address 97 voltage violations as they've done their contingency analysis of this future condition.

0:15:38
(Speaker Haugen-Hoffart?) Repeat that again.

0:15:41
(Speaker Weirs)
The analysis performed by MISO looking at the various contingencies on the system has identified that this project will help relieve excessive loadings on 70 different transmission elements and address 97 voltage violations in those future out-year conditions. **The project will also increase transmission capacity that will have the ability to enable new commercial and industrial loads. And when you think about a 345 kV line of this magnitude, we're talking about load additions that are possible in the magnitude of what we've already seen happening out in this area. As folks are aware, Applied Digital has added some load at Jamestown and Ellendale. A project like this is going to help serve that load and also result in the ability to add more larger scale loads like that, not only at the endpoints, but also anywhere along the line through the course of a future interconnection.**

0:16:38
(Speaker Christmann)
I just got to go back to what I was talking about before with the Ellendale to Big Stone flow. So really this is more about Ellendale to Jamestown than it is Jamestown to Ellendale. But we need the vowel in the middle for the really cool acronym, right? The flow will generally be when it's needed going north.

0:17:04
(Speaker Weirs)
That's my understanding. As you look at the system as an integrated system, interconnected in all those different places, really the Jamestown to Ellendale line will provide relief on that existing 230 system for an outage of the Big Stone South to Ellendale line.

0:17:22
(Speaker Christmann) Thank you.

0:17:25
(Speaker Weirs)
All right, the JETx project will also accommodate new generation in North Dakota. I'll just mention **as a part of MISO studies of these future conditions they added about 4,500 megawatts of new generation in North Dakota, and this line will help accommodate that future generation development.** It's also going to help reduce transmission congestion. That's going to help allow existing North Dakota generation to operate more often to get their product to the market. In addition, the project will also increase resilience to extreme weather events. I believe Otter Tail was in front of the Commission in the past talking about the 2023 Christmas ice storm and the conditions that we experienced out at Jamestown. We had a situation this past Christmas season where we had lost both 345 kV lines into the Jamestown load pocket and that forced us to have to operate the Jamestown pocket as an island for the matter of about one and a half days. We supported that entire load pocket through the use of our existing peaking plants that run on diesel fuel.

As we look at adding the Jamestown to Ellendale project, we'll now have a third source into the Jamestown load pocket, and this will help reliably support that load in the event that we lose both of those 345 kV lines in the Jamestown again. So tremendous reliability benefits for the Jamestown area. As we look at the southern end of this project at Ellendale, there's also going to be benefits to that area as we think about the current line from Big Stone South to Ellendale really ends at Ellendale as a 345 kV line. **Connecting Jamestown down to Ellendale will now create a looped 345 kV system and help address some of those voltage stability concerns that are present today at Ellendale.**

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(Speaker Christmann) What are the two 345 lines that are currently going into Jamestown?

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(Speaker Weirs)
There's 2 lines today. One comes from Center and goes over to Jamestown and then it continues east to Buffalo, North Dakota and then ultimately over to Bison substation and then Maple River, which is just outside of Fargo. All right, going down the benefits here, the next benefit is support to local landowners. **As we think about boosting the local economy, Otter Tail and Montana Dakota Utilities estimate that we'll be paying over $10 million to local landowners in this area as a result of the easement payments that we'll be paying for the project.**

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(Speaker Weirs)
It's also going to generate tax revenues for many of those governmental entities that support or that collect taxes, primarily in the form of property taxes. And also, as you think about the work needed to construct a project of this magnitude, we'll also be looking to leverage some of the local service providers in the area. It could be tree clearing companies, it could be local contractors to help with road improvements, collecting or getting gravel, getting the aggregate concrete.

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(Speaker Weirs)
Those are all things that we hope to be able to leverage the local businesses for. And lastly, as you think about the workforce needed to build a project like this, many of the local businesses will also benefit by purchasing fuel, meals, and lodging during the construction phase of the project. Speaking of construction, we do expect between 100 and 150 employees on site during the construction phase of the project. And we're hoping to be able to leverage some of the local skilled laborers for performing some of this work.

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(Speaker Christmann) **Regarding the landowner payments, have you started easement acquisition yet? And how enthusiastic have the landowners been to have that opportunity?**

0:21:11
(Speaker Weirs)
We have started land acquisition efforts. Last August, we started asking for survey permission along a proposed route, and then in February of this year, we started asking for options to get easements on property. Through the course of this interaction, we've actually been taking landowner feedback in the form of suggested revisions to our route, and at this point in time, we've looked at over 30 different reroutes for the line, and negotiations with landowners continue to go well. As of last week, we reached about a 33% voluntary easement status, and we're continuing to work on that, and we'll continue to work on that throughout the development phase of the project.

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(Speaker Haugen-Hoffart?) You said you've looked at... I don't remember how many reroutes. Have you rerouted it, or are you looking at it? I'm just curious on that.

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(Speaker Weirs)
So over the course of landowner discussions oftentimes we hear alternative ideas on where to reroute the transmission lines. So to date I would say that we've experienced or we've processed over 30 different reroute requests from landowners.

(Major static!)

0:22:24
(Speaker Christmann) I didn't notice you coming.

0:22:53
(Speaker Weirs)
So of the over 30 reroute requests you've gotten from landowners, I don't have an exact number on how many we were able to grant, but it has been most of them. And I don't know if anybody else has any additional color on that on the project team, but I'll open it up if there's any additional feedback.

(Speaker??) Yes, we continue to, as we engage with landowners, we continue to see more and more reroutes. But they're small reroutes, primarily on their property. They just want to move to one side or the other.

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(Speaker Christmann) And when you said about 33% of easements acquired, are you talking about the number of landowners that would need to be dealt with or about the linear miles of the line?

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(Speaker Weirs) It's based on the number of landowners. At this point, we have about 170 unique landowners along the proposed route, and we've acquired about 33% of the easements that we need for the line so far.

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(Speaker Fedorchak)
I have a question about the voltage and the voltage violations that you talked about a little bit ago. Could you give me those numbers again, Jason, and then um, kind of explain, give us some examples of what's happening there. I think you called it loading and voltage violation.

0:24:09
(Speaker Weirs)
Sure. Commissioner Fedorchak, if you don't mind, I'll maybe go back to this previous slide so I can use the map to explain this in a little more detail. So each transmission facility has a rating associated with it, and that rating is set set by the owner to avoid any damage to the facility and to avoid any safety concerns. And as you think about excessive loadings on the transmission system, this is a condition where the loading on the facility has exceeded the safe operating limit of the line. So in those situations, the market may have to re-dispatch to avoid that overload issue or may have to pursue underlying upgrades to fix those loading issues. And on the map again, just to illustrate this, it's this 230 kV path from Ellendale to Forman, to Hankinson, up to Wahpeton, that's experiencing some excessive loadings.

0:25:03
(Speaker Weirs)
And then also from Hankinson as we head down towards Big Stone. You'll see this is the system that's exporting this generation from North Dakota to the neighboring states. So as we look at the addition of the Jamestown to Ellendale 345 kV project, we have found that the additional line will relieve excessive loadings on 70 different transmission elements during this contingency analysis performed for that future condition.

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(Speaker Fedorchak) And is that, like, how often? Is it a constant thing? Like, how often are these excessive loadings happening?

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(Speaker Weirs)
I don't have an exact count of how many hours per year, but generally speaking, these are typically times of the year when we're seeing a large amount of generation and lower amounts of load. So we have higher flows throughout the system. We also see some of these same challenges during winter peak conditions, when the load in this area is higher than it is in the summer.

0:26:07
(Speaker Fedorchak) Okay.

0:26:08
(Speaker Weirs)
And if I may, Commissioner Fedorchak, just one other quick comment on these excessive loadings. Along with excessive loadings comes depressed voltages. What you'll see on these transmission facilities is the higher you load them, the lower the voltages will get on the system. So generally speaking, we're gonna see excessive loadings and depressed voltages accompanying one another in these same areas, and that's exactly what's happening here. As this 230 kV system is loading up to its maximum rating, the voltages are dipping to a point where it's violating the criteria set by the owner, and we need to do something to fix those issues.

0:26:45
(Speaker Fedorchak)
So when it's, when the demand is lower than the generation, which you said is one of the drivers, is there demand out of the state that wants that power or what's stopping it from just being curtailed? And how will that, I guess, there's a demand, how will more transmission help if there's no demand? Or maybe the demand is just out of someplace else. So explain that a bit.

0:27:15
(Speaker Weirs)
Sure. This would all be basically determined through MISO's dispatch in the energy market. And to the extent that there is demand outside of the state, the MISO market dispatch would try to get that generation out of North Dakota and to those neighboring states as long as we had sufficient transmission capacity available to export that generation. To the extent that that transmission capacity is constrained, then they'd have to curtail generation so that it would be bottled up within North Dakota.

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(Speaker Fedorchak)
So is what's happening now is there's this constraint, so it can't get out, there's demand outside, but it's constrained? I'm a little confused by your comment that one of the cause of the voltage violations is it occurs at a time when there's low demand and excessive generation.

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(Speaker Weirs) Yeah and that's a situation where the flow on the transmission system is at its maximum rating so that that we can't get any more generation out of the state in those situations.

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(Speaker ?) So it's wanted outside of the state. Somebody wants it, it just can't get there. Correct. Okay, so the demand just isn't local. Correct. Got it. All right, and that makes more sense.

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(Speaker Christmann) But what about when it's not one? Then by doing this we've just added more generation into the mix that has to curtail.

(Speaker Weirs) Correct. Can you repeat that please?

(Speaker Christmann) Okay, you seem to be alluding to times when the energy is needed somewhere, and this would open more avenues to get it there. But what about the times in the middle of the night and the nice spring and autumn evenings when it's not needed anywhere and we're curtailing and curtailing? If you're right that this will add opportunities for more generation in North Dakota, doesn't it just mean more generation facilities that need to curtail and lose money?

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(Speaker Weirs)
It's possible that could be a situation but I'm assuming most generation developers would be doing their homework before they would be interconnecting the grid to make sure that they have a viable business opportunity before proceeding.

(Speaker Christmann) I agree with that. The developers do because they get subsidized. It's the existing ones that are left hanging out to do the curtailing.

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(Speaker Weirs)
Yeah. And that comes down to how they set their market prices as they enter the market and MISO chooses which resources to dispatch.

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(Speaker Weirs)
Okay, I think we are on slide seven. As MISO performed their studies of the area here, they did evaluate five different alternatives to determine if any feasible alternative was out there that more effectively addressed the reliability concerns that were appearing on that 230 kV system in southeastern North Dakota, northeastern South Dakota, and west central Minnesota. This particular slide has a table that shows all of the various combination of alternatives that MISO considered, and as you'll notice, the list of alternatives here, you'll note that the Jamestown to Ellendale project is part of every different alternative that was tested by MISO, which further reinforces the importance and the benefits of the project to not only the region, but also this local area. The Jamestown to Ellendale project was identified as part of the Tranche 1 portfolio from MISO's Long Range Transmission Plan.

0:31:14
(Speaker Weirs)
This Long-Range Transmission Planning effort started back in 2020 and is planning to be broken into 4 different phases or 4 different tranches of transmission projects. As shown on the slide here, Tranches 1 and 2 are focused on the Midwest sub-region of MISO, while Tranche 3 will then turn its focus to MISO South region, and then Tranche 4 will look at focusing on inter-regional projects to help strengthen the connections between the Midwest sub-region and the South sub-region.

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(Speaker ?) It's really 5 tranches.

0:31:49
(Speaker Weirs) Yeah, do you consider tranche 2.1 and 2.2?

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(Speaker ?) I'm not buying the marketing.

0:31:54
(Speaker Weirs) Yeah. Understood

0:31:55
(Speaker) Sorry.

0:31:56
(Speaker Christmann) So do you mean there's a fifth one that's not mentioned here? No. Or do you mean 2.1 and 2.2 are two different tranches?

0:32:03 (Speaker) Yes.

0:32:04
(Speaker) Yeah.

0:32:05
(Speaker) They really are.

0:32:06
(Speaker Christmann) So you mentioned this one being $440 million. This project being $440 million. What was the total price tag of Tranche 1?

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(Speaker Weirs) $10.3 billion was the approved cost of the Tranche 1 portfolio.

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(Speaker Christmann) And go through two, three, and four, you can divide two or put them together.

(Speaker Weirs) Are you talking about the estimated costs? At this point in time, the other tranches aren't known. They're not finalized yet, so it's hard to put a price tag on them.

(Speaker Christmann) But there's estimates out there.

(Speaker Weirs) Yeah, I'm not comfortable stating a specific estimate because I don't believe that the portfolios are finalized yet.

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(Speaker ?) Tranche 2 is looking like, if you combine them, $30 to 50 billion. Probably a lot closer to $50. Because Tranche 1, 2.1 is almost 30, actually. Tranche 2.1 is almost $30 billion, right, Adam? Yeah. So they haven't really put a price tag on 2.2 that I've seen, but, um...

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(Speaker Christmann) So 2.1, you said, is about $30?

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(Speaker) Mm-hmm.

0:33:28
(Speaker Christmann) And 2.2?

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(Speaker ?) They haven't really said. And I don't know, is Tranche 3... at all, price tag range?

(Indistinct mumbling.)

0:33:47
(Speaker Weirs)
Okay, moving on to slide nine. Again, refocusing our discussion here on Tranche 1. MISO did take about two and a half years to perform the studies to support the Tranche 1 portfolio through the course of several different stakeholder meetings and workshops. And as a result of all that study work, they did approve 18 new transmission projects in July of 2022 and they call that the Tranche 1 portfolio. As you'll notice on the map here, the Jamestown-Ellendale project is Project Number 1 on the map.

0:34:33
(Speaker ?) I'm just curious, how did you prioritize the difference between Tranche 1 to Tranche 4? What were the key components on that? I mean, North versus south?

0:34:50
(Speaker Weirs)
Sure. Thanks Commissioner for the question. The actual prioritization of looking at which parts of MISO was performed by MISO, and the reason that they focused on the Midwest subregion first is because they're seeing the amount of generation being built in this region is far outpacing what's happening in other parts of MISO. So they're attempting to try to get ahead of the transmission needs because of the faster development of generation up in this region.

(Indistinct mumbling.)

(Speaker Weirs) So as Commissioner Christmann had just asked about here, this slide actually indicates that Tranche 1 represents over 2,000 miles of new and upgraded high-voltage transmission and the price tag that was associated with the Tranche 1 was $10.3

billion. As you think about these Tranche 1 projects, they do offer multiple benefits, and because of those multiple benefits, all these projects as part of the Tranche 1 portfolio were approved as multi-value projects, or MVPs, under MISO's Tariff. So under MISO's Tariff, a transmission project can be approved as an MVP if it meets one of three criteria. It needs to address a reliability issue that's in violation of a NERC reliability standard. It needs to provide economic value across a broad area with a benefit to cost ratio of 1.0 or higher, or it needs to support the reliable and economic delivery of energy.

0:36:23
(Speaker Weirs)
Because the benefits of the Tranche 1 portfolio are spread broadly across the entire Midwest sub-region. The cost of the Tranche 1 portfolio is shared on a pro-rata basis to all loads in that Midwest sub-region based on energy usage. **So what this means for Otter Tail's North Dakota customers is that they'll be paying for 0.61% of the projects, and Montana Dakota customers will be paying for about 0.47% of the projects.**

0:36:52
(Speaker Christmann) So does the southern region pay anything for these?

0:36:56
(Speaker Weirs)
In this case, the benefits were limited to just the Midwest sub-region, so that's the only load area that will be allocated, costs from the Tranche 1 portfolio.

(Speaker Christmann): And based on a couple slides ago, Tranche 3 will be just about the opposite.

(Speaker Weirs) Based on the focus for Tranche 3, we expect that the cost allocation would be limited to the Miso South subregion.

0:37:22
(Speaker Christmann) What about that big Tranche 2? That's north.

0:37:27
(Speaker Weirs) The intent is to focus on the Midwest subregion.

0:37:30
(Speaker Christmann) Okay.

0:37:31
(Speaker Weirs)
The next slide has just an overview of the project schedule. As I mentioned earlier, **we started outreach to landowners back in 2023. We actually held some public meetings to get input on the routing process** back in early to mid-2023, and then began defining a proposed route in late 2023. And we started securing land rights for the route in early 2024, in February in fact. We do plan to file a combined certificate of corridor compatibility and route permit application late in Q3 of this year.

0:38:12
(Speaker Weirs)
And **we're hoping for a PSC decision on the combined route permit filing early in the second half of 2025**. Assuming all this goes as planned, we would plan to start pre-construction activities in the fall of 2025. And some of those pre-construction activities would include tree clearing. We'd be working on lay down yards and getting road improvements ready to start construction in the spring of 2026. We'd start first, of course, with foundation drilling, and then that would be followed up with setting structures and then finally stringing conductor.

0:38:45
(Speaker Weirs)
And as the current schedule stands, we would have two to two and a half years construction and wrap the project up and have it in service by the end of 2028. We have reviewed Chapter 49-03 of the North Dakota Century Code and believe that we are in compliance with the requirements needed to obtain a certificate of public convenience and necessity. As you review our application, you'll note that the Jamestown to Ellendale project will not interfere with the service provided by any of the other utilities in the area. Otter Tail and Montana Dakota have articles of incorporation on file with the commission, and Otter Tail and MDU are committed to obtain all the applicable permits from federal, state, and local authorities prior to starting construction.

0:39:43
(Speaker Weirs)

So in conclusion, we believe that public convenience and necessity will be served by Otter Tail and MDU's construction, ownership, and operation of the project because of the reliability and economic benefits provided to customers. The project is part of MISO's long-range plan and was approved as part of their 2021 transmission expansion plan because of the reliability and economic benefits that it enables as part of the overall Tranche 1 portfolio. And Ottertail and MDU are fit, willing, and able to construct, own, and operate the Jamestown-Ellendale project as proven by their Articles of Incorporation, their Certificates of Good Standing, and their success in past projects.

0:40:28
(Speaker Fedorchak) Jason, was this project a standalone on the cost-benefit analysis? Or did it... I forget how it works. Was it all the MVPs were done together?

0:40:50
(Speaker Weirs) That's the latter is correct, Commissioner Fedorchak, all MVPs (multi value projects) were done together.

0:40:54
(Speaker Fedorchak) OK. Have you guys found a cost benefit of just this project?

0:40:59
(Speaker Weirs) We have not. In fact, Otter Tail doesn't have the necessary software to perform that calculation.

0:41:05
(Speaker Fedorchak) OK. And the benefits that you mentioned in your discussion about benefits, including like landowner payments and tax revenue, et cetera, those aren't part of the MISO business case, are they?

0:41:24
(Speaker Weirs)
They are not actually part of the MISO business case. I will mention to the commissioners here today that Otter Tail and MDU have commissioned a study with North Dakota State University to help better quantify the benefits of the project to the local area. And we do plan to include that study as part of our upcoming combined certificate of corridor compatibility and route permit application. So the commission will get a chance to see that coming up as we finalize that and better quantify those local benefits.

0:41:57
(Speaker ?) Who's doing that study?

0:42:01
(Speaker Weirs) We've commissioned North Dakota State University NDSU.

0:42:05
(Speaker Fedorchak)
You mentioned that this will accommodate **4,500 megawatts** of new generation. Do you know where MISO got that figure, or did you guys give that to them? Where does that come from? And is that generation in the queue, where, how do we...do we have confidence that that's actually probably going to materialize?

0:42:31
(Speaker Weirs)
The 4,500 megawatts was determined through a MISO stakeholder process when they built the futures to analyze as part of the LRTP study. And it's my understanding that the 4,500 megawatt assumption of generation in North Dakota was based on a variety of inputs, including stakeholder input from utility integrated resource plans. If there was an announced project, they made sure they included that in their assumptions. And then they also did look at the queue, and they tried to determine where there's been recent activity and used some of those locations as well for a future generation siting assumptions.

0:43:07
(Speaker Fedorchak)
And then you probably covered this, and I missed it, but the O&M for this line, how is that handled in terms of covering the cost?

0:43:38
(Speaker Weirs)
Yeah, the O&M costs for the MVP projects are recovered as part of the overall MISO tariff. So we will calculate O&M charges and pass those through as MVP charges under attachment MM of Otter Tail and Montana Dakota's respective attachments in MISO.

0:43:54
(Speaker Fedorchak)
So is it safe to kind of just in a simple manner assume that this is a decently size investment in both your systems that you'll pay only a fraction of the cost for it?

0:44:15
(Speaker Weirs)
Yeah, that's correct Commissioner Fedorchak, the calculations that have been performed by Otter Tail and Montana Dakota Utilities indicate that **North Dakota customers will pay in roughly 0.61%. I'm sorry, let me back up a minute there. Otter Tail's North Dakota customers will be paying 0.61% of this project cost, and Montana Dakota customers in North Dakota will be paying 0.47% of the overall project cost.**

0:44:42
(Speaker Haugen-Hoffart)
But what's the impact to the maintenance of it? How does that affect the ongoing cost? Because you have maintained 100% ownership on one and joint, but that's got to be some ongoing cost in which repairs will pay for.

0:45:06
(Speaker Weirs)
The MVP costs for O&M are treated the very same way they are for the investment needed to get the projects constructed. So if it's a capital cost up front for part of the construction costs, or an O&M cost after the project goes in service, those costs are allocated similarly across the MISO Midwest subregion.

0:45:26
(Speaker Christmann)
I want to go back to that allocation. It's one thing to talk about that on $440 million, and it was wonderful because we're only paying this small part of the costs of this, but this is the thing with socialization. In agreeing to that, we're paying that same part of the costs of the other more than nine and a half billion dollars involved here and the $30 billion on Tranche 2 and all of that, correct?

0:46:11
(Speaker Weirs) That's correct Commissioner Christmann.

(Speaker Christmann) So what's the rate impact in rate cases? We often talk about typical residential customers, as an example, so that the people that you serve and that we serve understand how they're going to be impacted. What is the impact of this project or Tranche 1 for each company?

Mumbling...You got the number two?

0:46:42
(Speaker Weirs)
Okay, so Otter Tail and Montana Dakota Utilities has performed calculations to determine the rate impact to an average North Dakota residential customer using a thousand kilowatt hours per month. And as you **look at the cost of just the Jamestown to Ellendale project, Otter Tail residential customers are going to see a rate impact of 18 cents per month, MDU customers will see an impact of 12 cents per month for just the Jamestown to Ellendale project.**

0:47:18
(Speaker Christmann) It doesn't really interest me because we're talking about a package deal.

0:47:23
(Speaker Weirs)
So I have those numbers handy here as well. As you look at Otter Tail's impact for North Dakota customers from the full Tranche 1 portfolio, again, an average residential customer for Otter Tail using 1,000 kW hours per month. The rate impact is estimated to be $5.85 per month.

0:47:46
(Speaker ?) Montana Dakota's additional cost for the entire Tranche 1 would be about $3.15 a month.

0:47:52
(Speaker Chris)
Would it be safe to say that if you're considering that it's about roughly $10 billion, we're talking another $30 to $40 billion?

So if you take that number times 4 and add to that, you get an idea of what the cost of Tranche 1, Tranche 2 would be. So it would be somewhere in the mid-$30s per month probably per customer once Tranche 2 and 3 are through. Is that fair to say?

0:48:34
(Speaker Weirs)
From a rate impact perspective, I think that's a fair statement. I just don't want people to lose sight of the benefits that these projects also offer to the local area and the region in general. So, yeah, if you look at it just purely on a rate impact basis, that's a reasonable assumption, Chris. But we also need to look at the full package and the other benefits these future projects will bring to the region and the local area.

0:49:01
(Speaker Christmann)
So when we do that, I completely understand the impact to government with taxes (inaudible)?? I can completely understand the benefits to potential new energy generation that is looking all over the country for places to get in on a transmission system to take advantage of federal subsidies. So I see that as a benefit to them. I'm wondering about the benefit to Otter Tail, and especially to MDU. We talked about the occasional inability to get our power out. Tells me that we have plenty to serve our people.

0:50:02
(Speaker Christmann)
And so we're entering into these compacts for all these socialized projects at a great cost to the system that benefits government and renewable generators, but I'm not getting quite the enormous benefits to the customers of these two companies?

0:50:29
(Speaker Christmann)
And I'll just add this to the question because I like both companies' responses. I started to get Otter Tail's because I understand the push from Minnesota to stop using the Coyote plant power and have all renewable. I don't really see the pressure on MDU.

0:50:56
(Speaker Weirs)
Thanks Commissioner Christmann. If I could maybe start from Otter Tail's perspective and then I'll hand it over to MDU to respond on their behalf. As you look at the Jamestown to Ellendale project, one of the huge benefits for Otter Tail, as I mentioned earlier, is the benefits that we're going to see to the local Jamestown area. As you think about the current load pocket and the existing sources into that load pocket, we were in a very difficult position last Christmas with the ice storm that took down both 345 kV lines that served Jamestown. As a result, we had to run that diesel peaking generation for almost one and a half days that consumed nearly 90,000 gallons of diesel fuel. If we add this new source from Ellendale up to Jamestown, this additional 345 delivery will result in a very much more...a much more resilient and robust transmission system that can serve that Jamestown load pocket, which, by the way, is Otter Tail's largest community, as you think about our service territory across our entire 70,000 square mile service territory.

So we see tremendous benefits of this project. And over time, we knew something was going to be needed to be done to that Jamestown load pocket. This project is going to be a huge benefit because of the fact that we can share the cost of the project with all of the MISO Midwest customers and get the huge benefit to our customers in the Jamestown area and anywhere along the line as we look to Otter Tail communities, even down as far south as Edgeley.

0:52:31
(Speaker Christmann) Does that happen very often where both those 345 lines were out?

0:52:35
(Speaker Weirs)
I'll mention that because both, last Christmas was certainly a unique situation with an extreme weather event, but I will also mention that even when it comes to reforming maintenance at the substation, when we have the entire load pocket sourced from a single substation, we do get into some very difficult situations when we try to schedule outages and be ready to survive that next contingency, so we don't have a contingency that takes down the entire load pocket. So now this third source will also help ease some flexibility and being able to perform maintenance more often during the year.

(Speaker Christman) Was that always an issue on maintenance or is that just since the addition of the data processing center in Jamestown?

0:53:24
(Speaker Weirs)
It certainly has gotten more challenging as we've experienced load growth in the area. Even before the addition of the

Applied Digital load, we did see some of the residential loads and commercial loads around the Jamestown loop increase over time. As you think about the Spiritwood Energy Park, there's a lot of activity going on there with the soybean facility going on. We have Avico?, Cavendish, a lot of those commercial customers in the area. And at some point, we have reached a load level where the local peaking generation can no longer reliably serve all of that load during certain times of the year. So it's become even more important now to have that third delivery in the Jamestown to help serve that area when we have an outage to the existing facilities.

(Speaker?) When both of those 345 lines went down coming into Jamestown, where did they fail at? Was it in that local area or was it somewhere else?

0:54:28
(Speaker Weirs) I don't know the exact answer to that. It was outside of the Jamestown substation. Actually Todd, do you have any idea?

(Speaker Todd) I know the line between Jamestown and Buffalo failed east of Spiritwood and I'm not sure where the line failed from Jamestown to Center.

(Speaker ?) And that both failures were directly related to the ice storm?

(Speaker Todd) Yes.

(Speaker ?) Okay, how is this line resistant to ice storms and failure like the other two lines?

(Speaker Todd) The conductor on this proposed line, JetX line, is going to be T2. That type of wire, it's a twisted pair, sheds ice. Ice does not form on there and get the galloping that a normal conductor would.

0:55:09
(Speaker ?) Okay, thank you.

0:55:12
(Speaker Christmann)
Before I go to any more, I'd like to get MDU's perspective on the benefit, unless you had a question on the follow-up of Otter Tail's perspective.

0:55:20
(Speaker Haugen-Hoffart?) I don't, I just have some commentary on Tranche 1 and Tranche 2.

0:55:25
(Speaker Christmann) This is sort of a double question, I'd like to get MDU's response.

0:55:30
(Speaker Rob? MDU)
Yeah, I think I'll start and then Darcy probably has some comments to add as well for Montana Dakota. There's some, we definitely see some reliability benefits as well from this increased transmission in the area. I think there's also some opportunities for us from a load serving perspective as well. **We've seen some interest in the area where our transmission has been growing, like Ellendale, where we can realize some benefits as a company and customers in North Dakota for these increased load opportunities that we have to serve like data centers.** And I think that Jamestown to Ellendale also gives us an opportunity to increase the transmission investment in North Dakota and allow a maybe future expansion of MISO's transmission system further west more into our system. And I think Jamestown to Ellendale line gives us that opportunity to continue that transmission further west into more intended?? use system, I think, in the future.

0:56:34
(Speaker Darcy?)
I would agree with what Rob says. And the other one that we're looking at, too, is this looking for a need for additional generation to come into the state, whether it's for ourselves or other developers. So, you know, without projects like this, it's hard to develop additional generation within the state. It does provide those opportunities as well. One for our own utilities to be able to supply the needs for our customers and also at least for additional development to happen in the state that otherwise wouldn't happen.

0:57:10
(Speaker Fedorchak)
So kinda stepping off of those comments, when Tranche 1 was being um discussed and the cost allocation, this is more background

for my colleagues, um when the cost allocation was being discussed, um our office and Darcy, so MDU, tried really hard to get a generator pays component to the formula. I mean, we took many, many runs at it, and we're starting to get some traction. And then people got nervous that we're taking too long and had to get going and it takes so long to build, et cetera, et cetera. So they move forward with this um postage stamp approach. Um and so we ultimately went along with it for the reasons, ya know, both the reliability reasons and recognizing like North Dakota is an exporting state.

0:58:16
(Speaker Fedorchak)
And we have potential to export more, both from the gas side, gas generator side, um uh perhaps through coal with carbon capture and storage if that's proven out, or if the science changes, ya know there might be more hope for um the coal fleet, and through ya know wind and renewables. So this Tranche 1 seemed like much more of a backbone type investments to bring the system um up to speed. I will say, Tranche 2 is much more about helping the states. And they even state this. MISO even states this. Tranche 2 is much more about helping

0:59:04
(Speaker Fedorchak)
the states meet their goals. So in my opinion, I don't think that, and I'm not prepared to just have North Dakota as long as I'm here, go along with Tranche 2, depending on how it all shakes up. But I mean, that's a play that we need to be looking at down the road, but um there should be a generator-based? component to that, and there isn't. And uh they've fought it tooth and nail. And the benefits to our state of that, especially 2.1, where we basically aren't even connected. And they've left MDU high and dry in that. There's no investments.

0:59:46
(Speaker Fedorchak)
They don't even have the system west of Jamestown on the map on their Tranche 2 stuff. So that one is an area where North Dakota needs to be very engaged in watching how the costs um come forward and what the benefits are of those projects, uh how they address the cost-benefit analysis, and um be prepared to not go along with it. Anyway, commentary, not for today's sake.

1:00:22
(Speaker ?)
So there's a lot of flexibility on the difference between the different tranches and the cost allocation?

1:00:28
(Speaker ?) No.

1:00:28
(Speaker ?) Or are you sitting saying, we did this for one, it's got to be this way for two, three, four, whatever?

1:00:35
(Speaker Fedorchak?) There's no flexibility. The cost allocation is set and it would have to be fought at FERC if we wanted to not go along with it.

1:00:43
(Speaker ?) Okay.

1:00:43
(Speaker ?)
A quick question on cost. You know, I don't think I'd be the only one who's a little shocked by the cost of the project. I would imagine you guys are probably maybe not surprised by it. But looking back at the costs of industrial materials and things like that, you've got like 85 miles. And when you do the breakdown between the substations and the lines, you've got somewhere in the ballpark of $4 million a mile for four structures per mile. I mean, how does that compare to more recent projects that you guys have done and what kind of an inflation, is it twice the cost of what you did 10 years ago? Any sense of that?

(Speaker?) Yeah, so it's basically doubled as what we had done on BSSE. BSSE, we hit the steel prices at an all-time low. 1:01:33 Right now, these steel prices, the indices are twice that what we had paid for the BSSE, along with concrete prices also.

1:01:48
(Speaker ?) And what year was that?

(Speaker ?) It was in service in 2019.

1:01:55
(Speaker ?) Julie, you missed the brand. It's very intriguing.

1:02:12
(Speaker ?) On our JETx? Is that how we say it? JETx? Good job.

1:02:38
(Speaker Christmann) Are there other questions?

1:02:48
(Speaker ?) I thought I could just sit quietly back there and I can't. I tried. Okay. So cost recovery of a line such as this, you wouldn't be coming in and asking for cost recovery in your transmission rider as rate based? Correct? You'd be coming in through a MISO charge in the transmission rider. Is that accurate?

Different skillset. I have a lot of good talk.

1:03:35
(Speaker Matt Olsen)
Thanks Victor. Matt Olsen here. Most of it, I think you're accurate about that. There's a small portion that's rate based.

(Speaker Victor) Okay, so what portion would be rate based?

(Speaker Matt Olsen) The small portion that represents North Dakota customers of Otter Tail.

(Speaker Victor) So the 0.6 percent roughly.

(Speaker Matt Olsen) Yeah.

1:03:56
(Speaker Victor)
That portion you would be adding to rate base and getting your North Dakota approved rate of return or your FERC approved rate of return?

1:04:05
(Speaker Matt)
This is where I probably need help from others. Probably, maybe better if we work this out and...

1:04:11
(Speaker Victor) It's just curiosity.

1:04:12
(Speaker Matt) Yeah.

1:04:13
(Speaker Victor) So you could file something just to kind of clarify those points of the cost reduction.

1:04:17
(Speaker 16) And it may be there already, but we can spell it out for you.

1:04:21
(Speaker ?)
Well, Matt, maybe speak to the FERC jurisdiction a little bit. I know MDU and Otter Tail have a little bit of a difference between, you have a small jurisdictional portion, but maybe, I think, and Victor can correct me if I'm wrong, but I had a misconception at first that this would be a rate-based rate recovery item, and maybe kind of speak a little bit to the mechanism that, how that gets recovered through, or how that gets charged back to customers, as opposed to being rate-based with the recovery and base rates and how it flows from MISO instead.

1:04:54
(Speaker Matt)
Yeah, I think I'll probably add confusion by trying to explain it myself, and I'd rather not introduce that here, but certainly...

1:05:02
(Speaker Victor)
That's perfectly fine if you're willing to make a subsequent filing just to kind of lay out the cost recovery of what I think would be interesting to demonstrate for this project, for the Jamestown-Ellendale line, and for the rest of Tranche 1, how that would pass through to North Dakota customers, because I would assume it's slightly different.

1:05:23
(Speaker ?) And we do have some of this in data requests, so we can just do a little addendum.

1:05:27
(Speaker ?) I will point there and spell it out for you there.

1:05:29
(Speaker ?) Sure.

1:05:30
(Speaker Fedorchak) Would it be different for MDU or Otter Tail?

1:05:32
(Speaker ?) Maybe. Next.

1:05:34
(Speaker ?) Yes, it's different. I do know that.

1:05:41
(Speaker Travis)
Travis Jacobson with MDU. Montana Dakota would only see in our transmission cost adjustment where we would see the Schedule 26, the MVP piece of that. And that would be the same for Montana Dakota's JetX project as well as the rest of Tranche 2. That's just going to come through our Schedule 26A, I think.

1:06:12
(Speaker ?) Okay, so then that would be based upon your FERC approved rate of return?

1:06:19
(Speaker Travis) That's true.

1:06:21
(Speaker ?)
Okay. I mean there's other stuff in there other than rate of return, but that's...

(Speaker ?) Same as BSEE and all the other ones today.

(Speaker ?) Absolutely. That's true. Yep. Okay.

(Speaker ?) And there is nothing that we would put in rate base at Montana Dakota.

(Speaker ?) And then that would flow through, it would be charged via the MISO 26?

(Speaker ?) I think it's 26A.

1:06:53
(Speaker ?) So for how many years?

1:06:56
(Speaker ?) Well until it's gone, so 40?

1:06:56
(Speaker ?) 40 years. OK.

1:06:57
(Speaker ?) I think that's all I have.

1:06:59
(Speaker ?) I can go down other rabbit holes if I want. That one seemed the most fun.

(Speaker ?) I'll be 95 when that's done.

1:07:07
(Speaker Fedorchak) What time? I'll be 95 years old when they quit paying for it.

1:07:16
(Speaker ?) Some people are pretty old, too.

1:07:18
(Speaker ?) I'll do.

1:07:19
(Speaker Christmann) I'll be pretty old too.

(Indistinct talking.)

1:07:34
(Speaker Christmann)
I don't know if this is more for staff or what? We're discussing this with Otter Tail and MDU because you're owners of the line and you need this certificate. But this rate impact is going to go to Xcel customers too, right?

1:07:51
(Speaker ?) Mmhmm

(Speaker Christmann) Do you know how much that is?

1:07:57
(Speaker ?) I can speak to that since Alex, I spoke to Alex Nesbitt, as far as the allocation of cost per megawatt hour, it's exactly the same for all of the companies. The difference is, as you see the difference between MDU and Otter Tail's rate for residential customer, theirs is just going to be in that ballpark of what they have. He hasn't gotten back to me on the actual thing, but it has to go through the jurisdictional allocation and the customer class allocations to kind of get at the customer rate. But it's going to be in the same ballpark. So the bottom line is.

1:08:29
(Speaker Christmann) The ballpark is so much different.

1:08:30
(Speaker ?) Well, it.

1:08:31
(Speaker Christmann) A little over three to almost six.

1:08:32
(Speaker ?)
Yeah, and I've asked them to expand upon that. But the point that I make though is when you look at the allocation, the cost per megawatt hour is essentially the same for each company. So, if you think about it like, the way I looked at it on a short basis is, if you jump through all the math, is one customer uses about one megawatt hour per month, and the cost was like, for a Tranche 1, was like $2.51 in 2031 per month. So you'd think it would be $2.51, but it has to go through all the allocations. So it all kind of starts from the same place. So, I'm still waiting to get what that exact number will be, but they all start with the same charges for the same amount of energy from the MISO cross-charters through the transmission route, the 26A or whatever you call it. So I'm waiting to get here what that number is exactly.

1:09:26
(Speaker Christmann) And the cooperatives are also going to be paying on this?

1:09:29
(Speaker ?) Well, if they're on MISO.

1:09:31
(Speaker ?) MISO co-ops.

(Speaker Christmann) Yeah, right.

1:09:45
(Speaker Fedorchak)
Which is MinnKota? No, they have their own deal, don't they? Yeah, they're not members. Got some other tariff. But an answer, I'll get, as soon as Alice gets back, I'll get you that information.

1:09:57
(Speaker 1?) Cass County? No? They're SBP. All right.

1:10:03
(Speaker Christmann) Anything else?

Speaker Fedorchak: I don't think so.

1:10:09
(Speaker Christmann)
Well I'll just say I'm going to continue a lot of discussions with staff. **Like I said, the end in this whole thing is necessity and I get the need, I get the benefit that that comes to government, to renewable developers, and to anyone who really wants to meet Minnesota's policy goals, but I'm not convinced of the rest quite yet, but I'll certainly be doing a lot of discussing and thinking.**

1:11:02
(Speaker ?)
I have one other one, I forgot about this earlier. So I just want to clarify, so this line is not needed because of Applied Digital load at either Ellendale or Jamestown.

1:11:14
(Speaker ?) Speaking specifically for Ellendale, no.

1:11:16
(Speaker 2) And for Otter Tail, no, it's not needed for Applied Digital at Jamestown.

1:11:20
(Speaker ?) And **we've got a couple of concerned landowners who have made that claim**, and I was fairly certain that was the answer. I just wanted to confirm it. So, if neither of those loads showed up, you would still be here requesting the same certificate.

(Inaudible)

1:11:40
(Speaker Christmann)
Okay, one more time. Any other questions? Staff? Commissioners? Okay, is there any objection to the evidence produced today becoming part of the official record and by the evidence I'm talking about the recording of the discussion as well as the slides?

(Speaker ?) No your honor. No commissioner. No objections.

(Speaker Christmann) So the evidence will become part of the official record upon which a decision will be made. Are there any other matters to come before the commission? Hearing none, this informal hearing is concluded. Thank you everyone. Thanks everyone. Thank you.

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https://apps.psc.nd.gov/cases/pscasedetail?getId=24&getId2=91#

Transcribed with Cockatoo

EXHIBIT 7

PSC Work Session – August 19, 2024

0:00:00
(Speaker Christmann) Okay, this is a work session of the North Dakota Public Service Commission on the Otter Tail and MDU Jamestown to Ellendale 345kV transmission line. It's **August 19th, 2024**. It's case number PU-24-91. I don't have anything else before turning it over to the portfolio holder. Commissioner Fedorchak, did you?

0:00:31
(Speaker Fedorchak) No, I don't.

0:00:32
(Speaker Christmann) Okay. All yours, Commissioner Haugen-Hoffart.

0:00:36
(Speaker Haugen-Hoffart) Well, thank you. I guess, going back to our commission meeting last week, I proposed an order and we got into some discussion. And so I think there's those discussion items that we need to go through. And I'm just going to say, I'm going to give just my question or lay it out. And Randy and Julie and staff can answer this. Looking at that Jamestown to Ellendale line, we've identified there's some congestions that we can need to get, be an exporter, get things out. So when I look at MISO and studying Tranche 1, this is an area that was identified. There would be benefits on building this 345 kV line. So my first question is, if it's been identified in the Tranche 1, can we quantify those benefits for MDU and Otter Tail to look at it? That's my first question. Has that been, I guess I assumed, and I shouldn't do that, that that was studied. So can we get some quantification numbers on that, the benefit of that line? So that's my first question. And I guess if we can get that, then that might lead to some more discussion.
So I don't know. I'm going to look to Adam and Chris or Julie to maybe give me some history there on that based on the 2 years that I've been on the Commission and in that area that that was has been identified and I thought MISO maybe did a good job on identifying that and this is the one the only project in Tranche 1 that North Dakota has, what I would say, is maybe benefit. So, I'll give that to...

0:02:56
(Speaker) I think...

0:02:57
(Speaker Adam) So I've got a couple handouts here that might help.

0:03:00
(Speaker Adam) Got the composition here.

0:03:01
(Speaker) Thanks, Adam. All right.

0:03:03
(Speaker Adam) I'll put this in the wrong order. I've got a couple, I only have two more. I've got this one, yeah. Okay, yeah.

There we go. I think it's in that order.

0:03:30
(Speaker Adam)
So we're here to kind of discuss the Jamestown to Ellendale 345kV line that was part of MISO's Tranche 1. I believe it was passed by the MISO Board of Directors in June of 2022. So, the first page you see, it is an overview. When we think of LRTP projects, we kind of have to think of them more in a portfolio approach. And in this particular line, it happens to have been studied and paired well with not just the single line,
which is the Jamestown to Ellendale line, but also the Big Stone South to Alexandria to Casey's Crossing. When it comes down to the benefits, there are benefits in terms of figuring out what kind of reliability benefits there are. And in this case, you'll see that this is from a MISO presentation that indicates that the Jamestown to Ellendale line, as well as in combination with the Big Stone South Casey's Crossings, relieves 40 elements with excess loadings for the first transmission element loss, or the N-1 and 70 elements with excess of loading for the second transmission element. When MISO first started going through their analysis, they looked at several alternatives. They focused a lot on six of them.

0:05:13
(Speaker Adam)
They look at largely, largely what kind of effect in terms of loadings it'll have. And it'll compare to see if, okay, if it can identify a mini

portfolio project, if you will, that relieves the most, and they also tend to look somewhat at the cost of those lines. But really it's a reliability analysis. And they also then perform an economic analysis on it as well. So kind of getting back to the question on the benefits that this provides. This first page shows for zone 1 through 7. We are located in zone 1, so that would be to the yellow to the right of that chart. Now this is the most conservative, what you call cost-benefit analysis, so the entire portfolio costs $10.3 billion, and then they figure out, okay, well, what kind of benefits can we attach to it such that the benefit-cost ratio is 1.0 or greater? So per the tariff, that's the hurdle that we're looking at. And what do I mean by the most conservative one is that they also show this for a 40-year present value for benefits as well as they increase the value of lost load that they give their other metrics to something that is probably a bit unrealistic.

0:07:02
(Speaker Adam)
So I think when people talk about and when you hear numbers reported, they're mainly talking about these numbers, which is the most conservative of them. So you can see that we're in zone 1. So the minimum is 2.8. And then that's where the max comes in. So we've always tended to focus on the minimum benefits that we can achieve. And if we then go and look at the second page.

0:07:43
(Speaker Fedorchak) And just to clarify, this is for the whole portfolio, not just this line. Right. Not just the two lines, it's the whole, all of Tranche 1.

0:07:53
(Speaker Adam)
Right, and we have asked before for them to break it down further and more granularly. Yeah, that's maybe something that we're working on, but these benefit metrics and BC cost ratios are for the entire $10.3 billion. They're all supposed to work together in one portfolio to deliver value.

0:08:19
(Speaker Adam) So if we take a look at the next...

0:08:21
(Speaker Fedorchak) One more quick question on that one, Adam. The inset over there on the right, is that North Dakota Resource Additions by 2039?

(Speaker Adam) Yes, they are.

(Speaker Fedorchak) So can you talk about the assumptions that drove that?

(Speaker Adam) Okay, so the assumptions that drive that is that starting off in the futures process when we first start taking a look at where to place these lines. We have to take a look at, okay, we have to meet certain IRPs, right? We have to meet our IRP goals.

0:08:59
(Speaker Fedorchak) And we meaning MISO. MISO, not we.
(Speaker Adam) Yeah, yeah, we.

0:09:02
(Speaker Fedorchak) MISO says, yeah.

(Speaker Adam) So MISO will collect every utility's IRPs and they'll take that and say, okay, we need to achieve that. And then they also will meet a certain amount of goals that are not, that are just goals, they're just wishes, if you will, that aren't mandated by the legislature, for instance.

(Speaker ?) So, give me an example of a goal that we might bring forward.

(Speaker Adam) If it was...

(Speaker Fedorchak) That's not us really, we don't have these. It's other states that have their goals and they'll do a certain percentage of them.

(Speaker Adam) Yep.

(Speaker Christmann) Well we have a goal, but it's long and exceeded.

(Speaker Fedorchak) Well these are more like state... the IRPs are what the companies are planning, right? So they assume that's gonna happen, because the companies are planning for those. They work to build a system that is gonna meet the needs of their members, which are the people with the IRPs. And then they'll build a system to reach a certain percentage of, say, Minnesota's renewable mandates, or Wisconsin's, or whatever. That's the other piece, component.

0:10:31
(Speaker Adam) Yeah, and in this component.

0:10:32
(Speaker Fedorchak) Of the futures. These are the futures.

0:10:34
(Speaker Adam) Yeah, yeah, and that's another important.

0:10:35
(Speaker Fedorchak)
It helps dictate how, and they're not like, you know, meeting 100% of any future. They're just used as the guidelines to begin to imagine what kind of system we're gonna need. Nobody really knows, but these are the things that ya know direct and guide what this future system they think is going to need based on what people are putting in their plans.

0:11:02
(Speaker Adam)
And that's an important point because we're looking at the year 2039. And by 2039, in this particular case of what what all of this benefit metrics is based upon, is that you meet 100% of your IRP goals. Not we, but MISO will say we're going to meet 100% of our IRP goals and we're going to meet 85% of our aspirational goals that they Commissioner Fedorchak was just describing.

0:11:39
(Speaker Fedorchak)
And I do think it's important to reemphasize that MISO is trying to build a system that enables the meeting of those. They aren't meeting them, they're building a system allows their members to meet their IRP goals and like Adam said, 85% of the state mandates. As a planning, that's how they plan. It's their planning protocol. So back to this resource additions. This is based on what they're seeing in North Dakota IRPs, mostly?

0:12:11
(Speaker Adam) IRPs they will put in some units that are model built.

0:12:16
(Speaker Fedorchak) For reliability?

0:12:17
(Speaker Adam)
Yeah, for reliability standards, as well as engineering kind of judgment, I guess, if you will.
You'll notice that there's, in this case, there's actually a combined cycle gas being built. You know, that was, you know, that's likely the conversion of maybe the coal.

0:13:10
(Speaker Fedorchak) Oh, oh, they're looking at converting that to... in their assumptions.

0:13:16
(Speaker Adam) Yeah, we, we in their assumptions. So... um...

0:13:19
(Speaker Fedorchak) Do they take into consideration that EPA regulations?

0:13:29
(Speaker Adam) They haven't. I don't think so. No, they haven't.

0:13:33
(Speaker Adam) So then kind of moving on to the next page. So these are the benefits that they've identified. First benefit is...

0:13:42
(Speaker Fedorchak) Let's talk for a minute about how these get developed. Yeah, okay. Because each one of these processes is like a big long you know stakeholder input on identifying what benefits are going to be used to measure the overall benefit um calculation. And these are where you get some questions from the IML. The last...He's pretty squishy on some of these benefit metrics, but even more so on Tranche 2.
So anyway, was there anything in particular about these benefit metrics that raised concern in the stakeholder process, Adam? I mean, I know we said that we objected to the decarbonization benefit being used. And so then in response to that, they took that out and told us what our cost benefit would be without it. And it was still higher than the one threshold, significantly higher.

0:14:59
(Speaker Adam) Yeah, and there's very little benefit that's derived from this decarbonization benefit, the BC benefit cost ratio goes when you move it goes from 2.8 to 2.6. So, it's kind of saying if you spend like a dollar you get two dollars and six cents back.

(Speaker Christmann) So, the two overwhelmingly large factors in the benefit column for zone 1 are one, congestion and fuel savings, two, avoided capital cost of local resource investment, correct?

(Speaker Adam) Correct. Yep.

(Speaker Christmann) Okay, for this project, not Tranche 1, but this project, and for North Dakota, not MISO, what are the avoided capital costs of local resource investment that this, what costs does this avoid?

(Speaker Adam) So this avoids the building of local generation that would cost more.

(Speaker Christmann) Like the gas plant that we ordered Xcel to build, for example? That's the only one I can think of.

0:16:16
(Speaker Fedorchak) Again it's modeled. It's not necessarily...

(Speaker Adam) Yeah, it's kind of like when we had the original MVP portfolio, we had to...we could share resources and then reduce local overbuild. So, if we're able to spread that out with transmission, then there's a point in which you're supposed to hit the sweet spot, and it's called the bathtub curve, right? In which you want to put your transmission overlay on your resources such that you're all in a sharing pool and you're able to then not build something, not have a grid that's vulcanized, such that we have no wires and we've got to overbuild a ton of maybe thermal generation because we couldn't then use a renewable source.

0:17:26
(Speaker Christmann) So the biggest share of our benefits are avoiding costs that we can't identify?

0:17:33
(Speaker Fedorchak)
That's not, their model costs out to 2039. I mean, you have to look at the time frame. So, um and that these might be good questions for, because MISO should be able to identify those things for this project, for that for actually this line or those two lines. So that's probably a question we could ask them to address. And I think it's an important one to understand, you know, how all this stuff is pulled together.

0:18:10
(Speaker Christmann)
The other one that is very significant in that is the congestion and fuel savings. And so I think any of us that in recent years watched LMP prices, I've seen the congestion that's over in that area, correct? Yeah. And this study was approved in 2022, so it was done well before Applied Digital was even discussed. Because my own just occasional but pretty frequent viewing of LMP prices I've seen and the heat map I'm seeing a lot less congestion problems over there and we've only got the first phase of Applied Digital going, so I don't know that these congestion benefits are really there for us anyway?

0:19:13
(Speaker Fedorchak) It might not be. It's a fair question. And also, Adam's not defending myself.

0:19:19
(Speaker Christmann) Oh.

0:19:20
(Speaker) OK. OK.

0:19:22
(Speaker Fedorchak) Adam is not MISO.

0:19:26
(Speaker Christmann) Well, it's kind of bringing their case.

0:19:28
(Speaker Fedorchak) He's trying so that we can understand it.

0:19:31
(Speaker Haugen-Hoffart)
I guess that was my question in looking at some of this is how much of this, I mean, gets updated you know as things go on, like Randy brought up, Applied Digital. I mean, how is that fed into MISO and updated so we have current more current information?

0:19:51
(Speaker Fedorchak)
Once these projects are approved, they don't go back and update all this. Like, this was agreed on and approved by the board more than a year ago. So, they don't go back and keep changing these. And re-justifying the case or changing the case.

0:20:08
(Speaker Haugen-Hoffart) Well, I have to say re-justify, but just more accurate data that we as PUCs could have. Like when the Tranche 1, when this case comes before us, we have more information, but lesson learned.

0:20:26
(Speaker Fedorchak) And we don't ever see all of Tranche 1.

0:20:29
(Speaker Haugen-Hoffart) Right.

0:20:30
(Speaker Fedorchak) This is the only line we'll see.

0:20:32
(Speaker Haugen-Hoffart) Right. But things have changed since then. I mean, point taken. Yeah.

0:20:37
(Speaker Fedorchak)
We should, we could ask MISO for them to provide us that for this. I don't know if they've got it at that granular level. To provide. The congestion fuel savings, avoid a capital cost of local resource investment. Well, even all the benefit metrics, if they can, for Zone 1, for just Jamestown.

0:21:02
(Speaker Adam) Yeah, okay.

0:21:03
(Speaker Haugen-Hoffart) Or could MDU, I'm sorry but could MDU provide us any of that?

0:21:08
(Speaker Fedorchak) I doubt it. They don't run the models.

0:21:10
(Speaker Adam) Yeah, they wouldn't have access to that level of information and detail in MISO.

0:21:17
(Speaker Fedorchak)
And the thing is, the other thing to remember, and this is just part of the reality of MISO, is if you look at the size of our zone, I mean, there's a lot of what's happening in Minnesota and part of Wisconsin driving Zone 1. And that's the reality for us in North Dakota and Miso. Zone 1 includes all of Minnesota and (inaudible Chanterelle?), Wisconsin.

0:21:44
(Speaker Chris)

So, especially on the fuel cost savings, it's one, because both RTOs do that kind of comparison when they run modeling, and that's one thing I've really struggled with in our zone. Usually, we have trap generation that can't get out, and when they do their model, well, this zone or this area is going to benefit by that trap generation getting out. Well, I suppose the zone as a whole is going to benefit, but our prices go up as a result of that. So that negative congestion that's happening down there changes to even keel with the rest of the system. And primarily in this instance, I think Minnesota's prices probably go down a slight bit, while ours go up to what the rest of the zone is seeing.

0:22:26
(Speaker Christmann)
And this is kind of one of my concerns here is, so our rate payers pay to build this and the benefits are, well there's this investment here, some big benefit, but it's mostly to whoever the new developer is that comes in and builds another wind farm, a few land owners, but not to most of these Otter Tail and MDU customers. And I'm just, I'm not seeing nearly the benefits or congestion improvements as what this seems to want to indicate.

0:23:01
(Speaker Fedorchak)
Well the other issue that I think is, two other issues that are relevant are the reliability savings or reliability impacts and are the access for our broader generation to get out. I mean, if there's congestion, there's generators in North Dakota that are being curtailed. And depending on price, you know, that hurts them. And you know the higher priced ones are the ones probably being curtailed first. So that's another North Dakota issue.

0:23:53
(Speaker Christmann) I guess it's a separate argument of whether this is the right time to have the battle. But therein lies a lot of the reason for me wanting to take on the battle. And I don't even know where or how the battle would occur. But OK, if the issue is somebody else out of state's need for energy, and some developer that wants to come in and set up some more wind farms here, fine, pay for it. Not our rate payers all the time. And so, yes, the RTO forces this cost allocation on us. But if we don't fight for it, or fight against it, successfully, guess what? We're going to be paying for, was it three that's all sells? So maybe not that. Maybe not one of them, but we're going to be paying for all the rest of them, too. And when better than now to fight it?

0:25:07
(Speaker Fedorchak) I don't disagree, and we did fight it. But we...

0:25:16
(Speaker Christmann) At MISO.

0:25:17
(Speaker Fedorchak) At MISO, yeah.

0:25:18
(Speaker Christmann) I'm talking about at FERC (Federal Energy Regulatory Commission).

0:25:20
(Speaker Haugen-Hoffart) So is that how it played out? I mean, going off of that? Tell me if... Yeah, I don't know. Tell, can you walk me, well, first of all, does anybody have anything else, Chris or Adam, to add to these?

0:25:32
(Speaker) Just the scale was...

0:25:34
(Speaker Chris) I was just going to add that the scale of Tranche 1, the numbers that we got from MDU and from Otter Tail were a little like ten and a half billion or somewhere between ten and ten and a half billion. And the cost per megawatt hour that they were estimating in 2031, which was the max rate, was about $2.54 per megawatt, or megawatt hour. So just as kind of a scale, now that, how that impacts, say, residential customers is going to depend upon the company, because each of the companies has their own allocation methodology for transmission costs. But just to kind of give you an average, I think, so Tranche 1 on average would be about you know $2.54 per megawatt hour. So, I'll throw NSP as an example, does a direct allocation per megawatt hour, so that would affect their customers by $2.54 per month for a thousand kilowatts or 1 megawatt hour of usage per month. But then we talked about Tranche 2, 3, 4, you know as you're getting up into that $50 billion range, then you know you're talking $10, $15 per megawatt hour. It is a relative scale.

0:26:52
(Speaker Christmann) OK, then I need to be corrected here and find out where I'm wrong. When we had our informal on July 8, I didn't write down $2.54 a month. I wrote $3.15 a month for MDU and $5.85 for Otter Tail.

(Speaker Chris) Correct. So, as I said, MDU and Otter Tail have an allocation methodology that's different for residential and for commercial, industrial, all that. I use NSP as an example because they do a per megawatt hour allocation, so it's a straight... it's a different methodology, but it's, I guess you could say cleaner. But the average that MISO is allocating, their number was $2.54 based upon their estimates at the peak in 2031 when all the projects are up and running before they start to amortize off. So yes, you are correct, like MDU's number was $3.15. The memo that I had was $5.75 and I think Matt Olson came back and amended that to $5.85 per megawatt hour.
So that's because they used different methodology for allocating those transmission costs. So, you are correct.

0:28:10
(Speaker Fedorchak) All right, so I think that Randy raised a good question about how, if we deny this, say, what is the result? Where does it go? Or do the companies, where can the companies um protest? Or MISO, I guess.

(Speaker ?) Well, I'm still getting acquainted with this case and I know you guys asked me to come in here and have some discussion. But if we have the issue in order, with the denial, obviously it depends on the basis of the denial and it depends on the basis of the challenge. It could either be in federal district court or it could be in state court. So it would be up to the issue. It really is being appealed.

0:29:00
(Speaker Fedorchak) So the comp the Otter Tail or MDU would likely then decide to take it?

0:29:07
(Speaker ?) It would likely be Otter Tail or MDU.

0:29:10
(Speaker Christmann) Or MISO.

0:29:12
(Speaker Fedorchak) Could MISO? Do you have any...

0:29:19
(Speaker ?) Again, depending on the issue and where it's at.

(Speaker Christmann) Well, let's say, I mean, if it went to court and the courts backed the commission on a denial, or no, overturned the commission on the denial, well then it would move forward unless we appealed. But let's say they backed our decision on a denial, wouldn't at some point this get to be a FERC thing, whether the states can stop, and this could be SPP too, stop RTO approved projects through their PCNN process? Isn't that something that is gonna have to get determined at some point or they're just all gonna go to low pays?

(Speaker ?) So, I'm guessing the issue that you're presenting is an interstate commerce issue from the discussion that you're providing. And I'd be happy to have some additional discussion with that, but I probably would not want to be having with that an open meeting without having an opportunity to review the tariffs that we're discussing.

0:30:35
(Speaker Christmann)
So, so we've kind of touched on these, but I want to reemphasize two points. One is, yes, we can talk about avoiding congestion or avoiding additional investment costs. I haven't found any basis for those other than someone who likes doing projects. Put the numbers together, I can't see anything. **I will point out, though, that among the project benefits are to accommodate new electric generation projects. And to me, that's who ought to be paying at least a good part of this, if not all of it.** Because that, to me, is the key benefit in this, is to add the new generators. And to the extent that's for decarbonization or to meet other states' policy goals, irregardless, the point is to add that generation. And I think that is the key benefit that this is looking to solve. The other, though, has to do with reliability in our discussion. This isn't in the presentation I don't think, but I'm using my recollection, correct me if it's wrong, the real reliability issue in North Dakota that was highlighted as an example that this could take care of was the very near miss at Jamestown.

0:32:22
(Speaker Christmann)

I think it's been said before, but kudos again to Otter Tail for still hanging on to that old generator in town there that almost never gets used and being able to keep Jamestown going as they did. But as this plays out in my mind, this project, what I have heard was, in order to add all the new generation, it generally flows from that, like an Ellendale point, down through South Dakota and Minnesota and out. But if there's problems there, they need this alternative route to get it up to Jamestown, and then from there on it can flow through Fargo and away. Okay, as far as to add the new generation, I guess that makes sense.

0:33:25
(Speaker Christmann)
It also tells me there's plenty of capacity in the transmission lines between Jamestown and Fargo for all this to flow that way, which tells me when Xcel builds their gas plant there, it can flow the other way. And that can just as easily be used to help solve any potential energy shortfalls in Jamestown. So I think the one investment that I can see that this is going to eliminate the need for is that generation plant. And I guess it's fine, as long as we're willing to have service when it's windy, but not when it's not. I don't think most of the people are.

0:34:15
(Speaker Fedorchak) Randy, did you review the project benefits identified in the company's um application?

(Speaker Christmann) I have, but it's been a while. And I don't know if I have.

0:34:24
(Speaker Fedorchak) How did we... we had an informal, right? Yep. That's how we...

0:34:30
(Speaker Christman) Was that presented then or was that in the case earlier?

0:34:49
(Speaker Haugen-Hoffart) Well, I think both. It's in their application.

0:34:51
(Speaker Christmann) And what you're looking at, though, is not in this.

0:34:53
(Speaker Fedorchak) This is their application. Right. This is their application.

(Speaker Christmann): What page?

0:34:57
(Speaker Fedorchak) 11. And to some extent, page 9 is Project Need. OK. I just don't know when they when all these um problems reliability problems, like the 40 transmission elements with excessive thermal loading for N1 contingencies and 70 elements with excessive loading. And then down below, the project improves voltages in the Red River Valley by relieving 97 voltage violations and 91 voltage violations for N1 contingencies. Like, how many of those are North Dakota customers? How much of that is a North Dakota issue? And I mean, I am I want to know.

0:36:13
(Speaker Fedorchak) I would have to be reminded of that. I'd have to have a more technical discussion, I think, with the company to understand the implications for our customers of not having this line.

0:36:27
(Speaker ?) Isn't N - 1 what drives congestion pricing?

(Speaker Fedorchak) I don't...Adam?

0:36:31
(Speaker Adam) If it's overloaded, so if it's overloaded, it could be overloaded for a number of reasons. You know, an outage definitely is it. I mean, that creates congestion such that if you can't um, if you can't have, if you can't fire up or move electrons from from point A to point B, and then you might have to go and fire up a more expensive (inaudible) peaker?, for instance, if you've got a line outage, for instance, or something like that.

0:37:23
(Speaker ?)

Right, but congestion pricing, and this is, I think, the case in both RTOs, it isn't because the lines that are in operation at that moment can't handle the load that's going across them. It's in the event of a loss of your biggest element, the remaining system isn't able to pick that load up without tripping.

0:37:47
(Speaker Adam)
It doesn't have to be – like you can get congestion if it just – if it – in the event that it would – if in the event that you had an outage. Right. Then in that case, yeah, then you – but you're not actually in an outage.

0:38:04
(Speaker ?) Right, no, I absolutely agree that you're not in an outage, but the pricing for congestion, I think, is based on that N-1 scenario.

0:38:12
(Speaker Adam) Yeah, that's how the grid operates, yeah.

0:38:16
(Speaker 6)
So, all that is to say, I think that's a good portion of what they're speaking to, and the 40 elements with excessive loading for the first transmission element loss. I think that's largely congestion. Does that make some sense?

(Speaker Fedorchak) And so?

(Speaker ?) I'm not drawing any conclusions from that. You started to talk about it a little bit and I don't know that that's the entire answer.

0:38:51
(Speaker Fedorchak) So the benefits of relieving that are it's not a reliability concern.

0:38:55
(Speaker ?) I'm not even saying that definitively. I think your question was what those 40 elements are and I think probably a good chunk of them are probably that N-1 scenario where overloading...

0:39:09
(Speaker Fedorchak)
Well, no. I'll put it a lot more simply. That's a bunch of technical mumbo jumbo. What I want to know is, how does this matter to North Dakota customers? Does it? Or is it just a bunch of sentences to make it seem like, jeez, that sounds bad. We better prove this. Right? So I don't know. Maybe it is a bunch. Maybe it is a big problem for North Dakota customers.
Maybe it isn't. I don't. I can't tell by this and I don't recall exploring that deeply in our informal with them. So I would want to know that so we don't, you know, so I can have that information.

0:39:49
(Speaker?) Yep.

0:39:50
(Speaker Fedorchak) In making my decision anyway.

0:39:53
(Speaker Chris?) Do you want to know that from the company or from MISO?

0:39:56
(Speaker Fedorchak) The company.

0:39:57
(Speaker Haugen-Hoffart) The company. It's in their application.

0:40:03
(Speaker Adam)
So just for clarification on that, so they're basically saying when they analyze this solution, they're kind of looking at it in conjunction with the Big Stone Alexandria and the other projects on Zone 1. So you're saying, okay, well I get that this applied to all of Zone 1, but

of these issues, how much of the issue applies to North Dakota specifically? So, we're kind of getting lumped in with the whole zone. And this is the issue to the whole zone, but how much of it applies specifically to us?

0:40:34
(Speaker Fedorchak) Yeah, and what is the impact of this? Is it a price issue? Is it a lot, you know, we can't get power at certain times, it's hurting the lines, like what is the actual, what are the issues that it's causing?

0:41:20
(Speaker Fedorchak) Yeah, and same, I mean, the company might have a problem. MISO needs to get us the more specifics of the impacts of this project on the benefit metrics that they've used here. And if they can get those for North Dakota versus all of zone 1, that would be helpful too.

0:41:52
(Speaker Christmann)
You know, when it's simplified down, when, I don't remember who was speaking at the time, I presume Otter Tail, because it was about Jamestown, but between the two, when we had the informal when they talked about that situation in Jamestown that I referenced earlier. Okay yeah that is something that happened, aware of it. It made a good case and point to me. I was thinking like okay now I'm seeing some benefit here. Until like I said, then I thought more about it except for supposedly within a little over a year, or things usually run late, but in the relatively near term, we have a new gas plant going far. Well, that should be able to do it. So I guess when they just say, oh, well, there's all these benefits, it's not very persuasive to me. Tell me what they are, where the shortages are, what can't we do.

0:42:59
(Speaker Christmann)
And we'll see once whether it seems to me that, or it seems to us as a group, as a body, whether those benefits then are primarily going to the rate payers that are being asked to pay for this or to somebody else.

0:43:12
(Speaker Fedorchak)
Yep, good questions. And as you said, like we tried in the cost allocation discussion to make these points.
They weren't, they didn't win the day. This is our next, this is our next tool to try to address them.

0:43:37
(Speaker Christmann) And while we're on this, I have a legal question. Oh, did you have something else?

0:43:43
(Speaker Fedorchak)
But I'm not also, you know, I definitely I'm not sure that this doesn't have just merits for North Dakota on a technical side. So I'm not like, I'm very open to that, hearing what the benefits are to our customers. Because I think that they're... and to our generators, I guess. I'd like to evaluate, be evaluating that along with it. So...

0:44:20
(Speaker ?)
So to clarify... clarify what I think I heard. So we're gonna get a response from MISO on the benefit metrics for zone 1 on this line specifically. So I think if Adam can reach out, that's probably the most efficient. And then whatever response you get, if you wanna pass that through Chris. And then Chris, if you can work with the Otter Tail and MDU on a response for what these elements, savings, and benefits are. And then, you know, if it's reliability benefit, how and in what circumstance. And we'll get all of that submitted into a couple of docket entries, hopefully, rather than just some emails flying around. And, you know...

0:45:04
(Speaker Christmann)
Yes, I know these things take time, but there's a reason why they take time. People don't make bad decisions. But it seems like as far as anything having to do with congestion in that area of the state, this should be recalculated based on Applied Digital's second phase being in effect.

0:45:31
(Speaker Christmann)
Because I understand they're pretty far along with it already, and the first phase is already going. Like I say, from my just viewing of heat maps, it's having quite an impact. So maybe I'm wrong about that, but it doesn't appear that way.

0:45:49
(Speaker Fedorchak)
But it's a good point to evaluate. Yeah, and then maybe they can provide information about what additional generation they've sited there in their long-range transmission planning that drove the need for these lines, cuz it isn't just what exists today, it's much more of what they modeled to be coming. So, you know, that is that is part of this equation. So they should explain that.

0:46:18
(Speaker ?) The generation that showed up?

0:46:21
(Speaker Fedorchak)
Where they, yeah, that's gonna, you know, it isn't just, well, we took care of the congestion now, because we've got Applied Digital there. There's a bunch more, how many more wind farms did they model being developed in the eastern part of North Dakota that will drive congestion up again?

0:46:39
(Speaker Fedorchak)
And those were driven by, probably by Minnesota environmental goals and others. But, yeah. Yeah, that would be helpful to know what kind of generation they modeled in that area.

0:46:55
(Speaker ?) Yeah, and where. Yeah, we can get that.

0:46:59
(Speaker Haugen-Hoffart) I'm going to think separately. I mean, we're going to work with Jack as far as maybe some next steps if (inaudible) just for an understanding as far as litigation.

0:47:19
(Speaker ?)
Yeah, we have to have that discussion. I would note as well, though, after we receive all the documents, all the information that's necessary, it may be worth considering appointing advocacy staff if we need to flesh out certain issues a little better and maybe have a formal hearing on it as well.

0:47:38
(Speaker Fedorchak)
Yeah, that's a good point. I'd be open to that because I really do want to understand the company side of it and the benefits that they're seeing.

(Speaker Christmann) Anything else?

0:47:49
(Speaker Haugen-Hoffart) No, I think this was a... First of all, I want to say thanks to everyone for getting this lined up so quickly on the work session. And no, I have nothing further. I look forward to the additional information to receive to evaluate.

0:48:13
(Speaker Christmann) Okay, with that, thanks everybody. And this work session is concluded.

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https://apps.psc.nd.gov/cases/pscasedetail?getId=24&getId2=91#

EXHIBIT 8

Memorandum

To: Commissioners Christmann, Haugen-Hoffart and Fedorchak

From: Christopher C Hanson Public Utility Analyst

Date: 10/16/2024

Re: Otter Tail Power Company/Montana-Dakota Utilities Co., 345kV Transmission Line-Jamestown to Ellendale, Public Convenience & Necessity, Case No. PU-24-91

On February 29, 2024, Otter Tail Power Company (OTP) and Montana-Dakota Utilities Co. (MDU) filed a joint application for a Certificate of Public Convenience and Necessity to construct, own and operate approximately 85 miles of 345kV transmission line and expand four substations located in Stutsman, LaMoure, and Dickey Counties in North Dakota (the "Project").

A Notice of Opportunity for Hearing was issued on February 29, 2024, with a due date of May 10, 2024. No requests for hearing were received.

A memo was issued on June 26, 2024, providing the details of the cost, purpose and cost-benefit analysis of the project; the specific costs that would be allocated to North Dakota customers as a result of this project as well as the rest of MISO's tranche 1.

An informal hearing on this matter was held on July 8, 2024.

An order was proposed to approve the order for the August 14, 2024, North Dakota Public Service Commission (Commission) meeting. This order was tabled and a Work Session was then held on August 19, 2024, to discuss the outstanding issue and concerns regarding the project. There were several issues that the Commission requested be addressed:

1. What are the benefits to our North Dakota constituents?
2. How much of the reliability issues (N-1s and N-1-1s) affect North Dakota specifically and what is the impact of those issues? Does it affect pricing, lines, etc.?
3. Midcontinent Independent System Operator (MISO) should provide more specifics of the benefit metrics for zone 1 of this project and for just North Dakota (ND) if possible. Do these metrics consider the impact of Applied Digital and additional generation? Do they anticipate further generation that will continue to drive up congestion?

As a result of this session, we sent a request to MISO to explain the benefits to address the key reliability and economic benefits of the project.

In response, we received a letter from Jeremiah Doner, the Director of Cost Allocation with MISO on October 14, 2024, addressing the justification and benefits of this project. Specifically, he states that this project will remedy the N-1 and N-1-1 issues noted in the previous memo and he identifies the elements that are projected to be affected by thermal overload and voltage issues. These N-1 and N-1-1 events are *projected* based upon each company's long-term forecasts of load and generation growth. Essentially they are projected overloading of lines, transformers and substations that could result in customer outages.

Mr. Doner further notes that this not constructing this project is a critical part of the MISO LRTP Tranche 1 portfolio and that not constructing it would jeopardize the benefits of the other projects in the tranche and could lead to the development of less optimal solutions to address reliability and economic concerns.

Per Mr. Doner, this project ties together the existing Coyote-Maple River 345 kV and the Ellendale to Big Stone 345 kV lines. Further, this line, in conjunction with the Big Stone-Alexandria-Big Oaks project which will alleviate the loading issues along the North Dakota, South Dakota and Minnesota borders. In the absence of this project, those loading issues would need to be addressed by local reliability projects and borne by the local transmission pricing zones.

MISO looked at five alternatives, but all six proposals assumed the Jamestown to Ellendale line would be constructed. The only variations were related to the additional facilities to the east.

Mr. Doner identifies that these projects will provide more reliable and efficient delivery of energy from low cost, regionally sited generators. He further notes that this build-out will "allow for the continued interconnection of new generation resources in areas that offer higher capacity factors for intermittent resources, such as wind generation". In other words, it creates additional capacity for more wind to be transmitted from North Dakota eastward.

Additionally, we sent data requests to MDU & OTP requesting they identify the N-1 events used to justify this project and which of these were located within North Dakota; whether other alternatives to this project were investigated and whether MISO considered the impact of Applied Digital and the prospect of future generation in the studies that supported this project.

Otter tail responded that 88 of the 2,010 total Tranche 1, N-1 projected thermal events and 229 of the 1,728 voltage issues were located within North Dakota. This isn't apples-to-apples with the application but does illustrate that a significant portion of the N-1 and N-1-1 events are located within North Dakota.

They further stated that (as noted by MISO) there were six options evaluated, but all options included the Jamestown to Ellendale line as it serves to connect the existing 345-kV infrastructure in North Dakota. OTP also noted that MISO did NOT include Applied Digital's operation and future plans in the model used to create Tranche 1 but ARE included in the model used for Tranche 2.1. This model DID include a projection of future generation located west of Fargo including 200MW of gas generation and 800 MW of solar.

Leif Clark also conducted an analysis of the pricing (LMP) and congestion (MCC) rates in the Ellendale area in the 12 months prior to Applied Digital coming online as well as the 12 months after they were fully operational and concluded that it had reduce the MCC rates in the Ellendale vicinity by 56% and 69% and conversely increased the LMP by 46% and 12% respectively. Thus, it does appear that Applied Digital did reduce the congestion which in turn increased the prices in the Ellendale vicinity. It could therefore be anticipated that the next phase of the Applied Digital expansion would further reduce the MCC and increase the LMP in the short term.

Cc Matt Olsen-Otter Tail Power
Travis Jacobson- Montana-Dakota Utilities

EXHIBIT 9

PSC Work Session – October 17, 2024

0:00:00
(Speaker Christmann)
Good morning, everyone. This is a Public Service Commission work session, so we don't take testimony or anything. We just discuss information that we've received. I'm Randy Christmann, joined by Commissioner Sherry Haugen-Hoffart. Commissioner Haugen-Hoffart, this is, of course your portfolio. Commissioner Fedorchak is tied up on another project but I believe will be here just very momentarily. I know some, well this is certainly your portfolio, the OMS portfolio has a big impact on this and I know some of my comments have to do with some OMS things.

0:00:53
(Speaker Christmann)
So I guess I know I would rather maybe get into my thoughts and comments once she is here, but I think it'd be fine if you want to, if you want to kick it off and whatever kind of roundup of the case that you might have, either you or staff, however you want to proceed, Commissioner.

0:01:15
(Speaker Haugen-Hoffart)
OK. Thank you, Chair Christmann. Yeah, with this work session, I'm going to frame it up this way as a portfolio holder. Based on the last work session, there were inquiries that we, as commissioners, had information that we requested, both from MDU and Otter Tail, but then also MISO. So I thought it would be best, and I talked to staff, that Chris is going to summarize some of his communication that he's had with the two utilities. And then Adam, I believe I've asked you to go through some of the MISO information that we inquired. So we have the foundation of what the inquiries were. And then at any time, Randy and I, or when Commissioner Fedorchak comes, we might ask for further information. So just to let everybody know how this work session is going to go.

0:02:24
(Speaker Haugen-Hoffart) So Chris, I'll turn it over to you as far as the communication between MDU, Otter Tail, and yourself and the information that we requested.

0:02:33
(Speaker Chris Hanson)
Okay. Thank you, Commissioner. I'm Chris Hansen. I'm public utilities department staff here with the North Dakota Public Service Commission. As part of the follow up, we had some inquiries of Otter Tail and MDU, and Jason Weirs, who's here, was the one that responded on a lot of these. And I have a little bit of follow-up that wasn't in the data request that he followed up with recently that I'll add in here.

0:03:03
(Speaker Chris Hanson)
So there were basically three questions that we were asking them specifically coming out of the last work session. The first question was, what N-1 events were identified as justification for the line and which of these were in North Dakota. You know, so we were, so I talked about, I mentioned events versus elements. You know, he's talking about in the write up that there were 40 transmission elements and 97 transmission elements. Or 40 transmission elements were relieved. There were thermal issues in 97 elements during N-1 events.

0:03:43
(Speaker Chris Hanson)
It got a little conflated between elements and events and stuff like that, so Jason did some follow-up on the question, and I'm gonna work off of his follow-up as opposed to the actual response to the question because it's actually more clarifying. He said, upon our review of the MISO study results from the Tranche 1 studies, we've identified that the Jamestown-Ellendale 345 kV project, in combination with the Big Stone-Alexandria-Casey crossing, or Big Oaks 345 kV project, relieves thermal loading issues on 56 elements during N-1 events, instead of the 40 that was noted in their initial response.

0:04:32
(Speaker Chris Hanson)
Of the 56 events or 56 elements that had their thermal issues relieved with these two projects, eight of those elements were in North Dakota, so like 14 out of the 56 were in North Dakota. Based upon the evaluation of thermal issues, we've used engineering judgment to conclude that all eight of these transmission elements in North Dakota are likely a direct result of adding the JETx project to the system.

Likewise, a review of the MISO study results from the Tranche 2 studies have identified that the Jamestown-Ellendale and the Big Oaks project, you know, the Bigstone to Big Oaks project relieves voltage issues on 70 transmission elements during N-1 events instead of 97. And of the 70 transmission elements.

0:05:10
(Speaker Fedorchak) Excuse me, Chris. Sorry. One quick second. Just to bring me up to speed, what are you reading?

0:05:14
(Speaker Chris Hanson)
Well, so Commissioner Haugen-Hoffart asked that I follow up on some of the responses to the questions that we had for MDU and Otter Tail, and Jason Weirs responded to this about, and the question was, what N-1 events were identified as justification for the line of which of those were in North Dakota?

0:05:33
(Speaker Fedorchak)
So we were wondering about how much of the N-1 and the N-1-1s were related to North Dakota because the project was noting the total amount but it was a combination of North Dakota, South Dakota, Minnesota.

0:05:49
(Speaker Fedorchak) Yah, So. Is that something we can all get a copy of? Or do we have that?

0:05:51
(Speaker Chris Hanson) This is docketed.

(Speaker Fedorchak) The memo that you wrote.

0:05:54
(Speaker Chris Hansen) This one I just got this morning. So I literally was reading it before the meeting. So, Jason and I.

0:06:00
(Speaker Fedorchak)
It sounds like there's a lot of great information but it might be easier for us to follow it if we had copies of it while you wait. Can I take a second to do it? Yeah, I think. I mean, is that right, Randy?

(Speaker Christmann) Sure.

0:06:11
(Speaker ?) What's that?

0:06:13
(Speaker ?) No, you go with the MISO stuff. You're the MISO guy.

0:06:16
(Speaker Christmann) So. Sorry. I will say this, though. The previous work session was two months ago.

0:06:25
(Speaker Hanson) Yeah. Right.

0:06:27
(Speaker Christmann) And so now we're getting answers this morning.

0:06:29
(Speaker Chris Hanson)
Yep. So, while Victor's making a copy of that, just a note, too, that to clarify that when they were looking at the N-1 and N-1-1, that's two points to clarify on that is that that's based upon like 10- and 20-year projections. So, they're looking at the projected load, and they're looking at projected generation growth. And then they're looking at basically these constraints that will cause congestion. So, it's a projection of where they think the system will be and where transmission needs to be built out going forward.

0:07:17
(Speaker Chris Hanson)
And so the second point to make is when on the Ellendale to Jamestown line is that when they're looking at these issues, these N-1s and these N-1-1s, that's a combination of both the Jamestown to Ellendale line and the Big Stone to Big Oaks line. So it's not just the Jamestown to Ellendale in isolation. Sure. So, it's looking at the complete thing.

(Speaker Fedorchak) Which are both part of Tranche 1?

(Speaker Chris Hanson) Right, right. So, and I guess there's a third thing too that is pointed out, that there's currently a 345 line that runs from Coyote to, I think, Maple River that runs through Jamestown. If you think of that as leg one, and then there's currently a line that was built starting like in 2018 that goes from Ellendale to Big Stone, and you think of that as leg 3. The Jamestown to Ellendale is leg 2 of the 345 kV circuit, if you want to call it that.

0:08:11
(Speaker Chris Hanson)
And then they're extending Big Stone through Alexandria to Big Oaks, which is approximately in the St. Cloud area of Minnesota. So that's kind of like leg four of this whole thing. So we have currently leg one and three, and they're basically adding legs two and four to this 345 kV line to get power out of North Dakota and moving it to the east. I guess power can move both directions. So just a little clarification that the N-1s and the N-1-1s are forward looking. The congestion issues, the N-1s and the N-1-1s, those are a combination of both the Big Stone to Big Oaks line and the Ellendale to Jamestown.

0:08:54
(Speaker Chris Hanson)
And the third thing is that when they looked at this project, it was completing this whole like loop of lines, basically, going all the way from the Coyote up in the coal country well into Minnesota. So getting back to the N-1s and the N-1-1s, they updated their numbers, like I stated. So to reiterate for Commissioner
Fedorchak, that you know instead of... I lost my place here a little bit. Instead of 40 transmission elements that were related to thermal, there was actually 56 and they identified 8 of those were specifically in North Dakota. So that's 14 percent. So one, you know, one-seventh. And that would be likely relieved by this line. And then instead of the 97 that they previously identified, there were 70 transmission elements.

0:09:48
(Speaker Chris Hanson)
Instead of the 97 that were previously noted, and of the 70, 21 of those were in North Dakota, or about 30% of those, and those were the ones related to the voltage. So anyways, there's 14% of one and 30% of the other. So there's a representative portion of the total that we're involved.

0:10:11
(Speaker Chris Hanson)
And in the MISO response, it actually points out some of the substations, transformers, and lines that would be affected by that specifically, where they see the constraints without this being constructed. So that's kind of in response to the first question, which came out of the last working session, which was looking at this project and saying, well, how much of this was actually within North Dakota jurisdictionally? That was one of the questions we had. And the second question that we had was, sorry.

0:10:45
(Speaker Haugen-Hoffart) So, Chris, summarize that for me. I mean, they talked about the project benefits and all these voltage violations and all that. So, when we narrow it down to North Dakota, we had 17% occurrence and about 30%.

0:11:04
(Speaker Chris Hanson)
Right, of the ones they noted. So, they specifically stated that just related to North Dakota, there would have been 8 of the thermal and there would have been 21 of the voltage N-1s and N-1 you know events, or N-1 elements that would have been located in North Dakota.

0:11:27
(Speaker Christmann) Would have been or will eventually be?

0:11:32
(Speaker Chris)
Will eventually be, sorry. Yeah, I know, it gets confusing because we have current congestion, but this is a forward-looking, the N-1s and the N-1-1s are forward-looking, so I will try to state that correctly. They're projecting that those will be in North Dakota.

0:11:48
(Speaker Haugen-Hoffart)
So wrap it up as in a benefit to North Dakota, this line, on how it addresses this. Well, I know it's forward-looking.

(Speaker Chris) Right.

(Speaker Haugen-Hoffart)
That's one of the things that this is long-term transmission planning. So, that will eliminate the would have been's, or what's the projections on the future?

(Speaker Chris Hanson)
Well, I mean, so, these are elements that they're projecting are gonna be constrained based upon Otter Tail and MDU's load growth, as well as the projected generation growth. So essentially, it's saying if we grow the generation, we grow the load, where are the constraints going to fall on the transmission side? So, if you look at the 345 kV line, a couple quick items to note on that is that based upon how that's circuited, that can relieve about 2,000 megawatts of capacity or production. It can carry about 2,000 megawatts on the line. And as I recall, and Adam can clarify on this, but MISO also builds their system to be double-circuited.

0:13:00
(Speaker Chris Hanson)
So presumably then it could carry another set of 2,000 megawatt lines. So, it presumably has about 4,000 megawatts of capacity, of potential on the line. 2000 initially and forth, I mean, if they decided down the road to double circuit it, that they have that option to do that.

0:13:20
(Speaker Chris Hanson)
So we create a significant amount of capacity. I mean, I think the analogy we always use is the interstate highway system. This would create really an enormous amount of capacity, you know, coming in and out of North Dakota. So then these points of the 115 and the 230 lines, where a lot of this is going over now, it would relieve those lines and would avoid these constraints going forward.
Does that answer your question?

(Speaker Haugen-Hoffart) Yep

(Speaker Chris Hanson) The second question was, exclusive of the need to get power out of North Dakota and defeat Ellendale, Big Stone, and the future Big Stone-Sherborn lines, what other alternatives identified would have addressed the previously identified issues for less cost? And so, when they came back, and basically the way MISO evaluated this is they had six different options, but every single one of these options included Jamestown to Ellendale.

0:14:23
(Speaker Chris)
So there were six different ways that they tried to get the power from Big Stone into Minnesota and stuff. But as I pointed out, the way you can kind of look at this is Jamestown to Ellendale is the missing link between the Coyote to Maple River and the Ellendale to Big Stone. So, every one of these options they looked at included building this line.

0:14:50
(Speaker Chris)
So they didn't look at, they didn't have, they obviously thought this was such a critical part of the infrastructure that all of their options included this, so they didn't really, they didn't look at other options. I think this was basically something that they felt was pretty self-evident. And they did actually point out different options on like the Minnesota side about how to get the power into Minnesota and how to move it around Minnesota. But every one of the options included Jamestown to Ellendale. So, they didn't really look at, I guess you could say they didn't look at other options because I think they felt this was such a critical part of the infrastructure.

0:15:26
(Speaker Chris)
The other thing that I would note going to the MISO report, or the MISO response is that they look at these tranches as a whole, and Adam deals with MISO more than I can, but they look at these as a whole. So, they don't look at necessarily one project in isolation of the other projects. As I noted, when they evaluated this project, they evaluated it with the Big Stone to Big Oaks, both of those together and looked at the constraints, but they also kind of look at the whole Tranche 1 is kind of one big project. So, if, they point out specifically that if you take one part of the project or one of the projects out, it actually affects the whole tranche for the project. So, they don't look at these things necessarily in isolation. So, in this case, they obviously felt that Jamestown to Ellendale was a critical piece because they didn't actually have an option where it didn't include Jamestown to Ellendale.

0:16:32
(Speaker Chris)
So that was my second question. The third question was, did MISO include the impact of Applied Digital's operation in future plans, as well as the prospect of generation West of Fargo in their calculations, if not, have either of your companies attempt to do this? So, when

they did the studies for Tranche 1, they did not include Applied Digital in those, because they, and the other thing is that, so they did not include the Future 1 models, which was used for Tranche 1, was before Applied Digital got up and running.

0:17:14
(Speaker Chris)
And, but they did actually include, they did actually include the 200 megawatts of natural gas generation west of Fargo. So, we had the question specifically about whether it included that in the model. It does. They also pointed out that it includes 800 megawatts of solar generation in the mix as well. **So, they do actually take future generation plans into account on this, but Applied Digital was not included in the initial Tranche 1 analysis. They did point out, however, that when they did the LRTP Tranche 2.1 portfolio, which I think we've been having some conversations on lately, that does actually include the impacts of Applied Digital's load, and then doesn't say specifically if it's including the, let's see here, it includes Applied Digital's operation in future plans and those subsequent models in the 2.1. So, they're playing catch up.**

0:18:03
(Speaker Chris)
They didn't include it in the Tranche study, in the Future 1 model which was used for Tranche 1, but it is, as they go along, it's being updated in the future Tranches. **So, the I guess the answer to that is that Applied Digital wasn't included, future generation was included.** I would note that in my memo that one of, Lief Clark, the engineer on our staff, actually did an analysis of the 12 months prior to ramp up of the first phase of Applied Digital and then looked at the 12 months after it was ramped up, and he did actually see that it did relieve a significant amount of the congestion on the system as occurred at that time. So, what that did is reduce the congestion and raise the L&P prices.

0:19:07
(Speaker Adam) And we have the numbers right here.

0:19:09
(Speaker Chris Hanson)
So he found that it reduced the Ellendale 1 and 2, it reduced the MCC, which is the marginal congestion, by 69% and 56% from before to after. And then he showed that the L&P prices actually increased by 12% and 46%. So as you relieve congestion, it allows the power to flow more freely over and it levelizes the L&P prices. So if you look at a map, like Victor was showing me yesterday, if you look at a map in North Dakota when it's constrained, we have excess production on windy days, so the prices are sometimes zero or even maybe even negative. And that gets constrained so that it can't, and then you look east of that constraint into Minnesota and the prices are higher, so as you remove the constraint, it levelizes the prices. So that as you remove the congestion, the L&P prices should will probably, on average, come up. That's the expectation.

0:20:15
(Speaker Fedorchak) For North Dakotans?

0:20:16
(Speaker Chris Hanson) For North Dakotans, right. Um, so...

0:20:19
(Speaker Fedorchak) Another great benefit sometimes...inaudible

0:20:20
(Speaker Chris) Well, yeah, for customers. But then, yeah. So that was the 3 responses that we had from them.

0:20:29
(Speaker Christmann)
Can I ask, on that though, when those L&P prices go so low, negative, or even if it's $5 or $10 dollars, when those come up, it's because energy is flowing, meaning it's getting somewhere else and lowering there. So it's somewhat balanced out?

0:20:55
(Speaker Chris) Correct.

0:20:56
(Speaker Fedorchak) So, that's the goal.

0:20:58
(Speaker Chris Hanson)

Yeah, well, and it's pointed out, too, that for a consumer, then it means they're not getting super, uber low prices, which is what Applied Digital is saying, why they located where they're at is because they're getting this super low energy price. But the other thing it does is it levelizes prices, is that it theoretically, but I think logically would mean that it should provide a more incentive for our thermal to produce as well. It should, you know, when the prices get depressed to the point where the coal gets interrupted or the gas gets interrupted, if those prices levelize more, it should provide a better environment for them to operate on a more consistent basis as well too. So, it's a trade-off on things. So those are the basic questions that we had. We also had the MISO response. I think I'll read my summary of that so that I don't have to go through the...

0:21:51
(Speaker Haugen-Hoffart) Are you going to go through that or is Adam?

0:21:55
(Speaker Chris Hanson)
Adam. Adam preferred I do that. So, the MISO response, I'll just kind of read from the memo, and I apologize. We just got this the day before yesterday, late in the day or something like that. So this is a pretty quick turnaround on things. So, I said, as a result of the session, we sent a request to MISO to explain the benefits to address the key reliability and economic benefits of the project.

0:22:29
(Speaker Chris Hanson)
In response, we received a letter from Jeremiah Donor, the Director of Cost Allocation with MISO, on October 14th, addressing the justification and benefits of the project. He states that this project will remedy the N-1 and N-1-1 issues noted in the previous memo, and he identifies the elements that are projected to be affected by thermal overload and voltage issues. As I noted, these N-1 and N-1-1 events and elements are projected – oh the Miso Report? Sorry – Are projected based upon each company's long-term forecasts of load and generation growth.

0:23:03
(Speaker Chris)
Essentially, they're projected overloading the lines, transformers, and substations that could result in customer outages and reliability issues. Mr. Donor further notes that in not constructing that this, oh, I didn't write this right, that not constructing this project, yeah, I got a double negative here, but essentially he noted that, sorry, I apologize for that, that not constructing this project would affect the entire Tranche 1 because it's a critical element of it. Obviously, we're moving power out of North Dakota, so you could probably argue that this is one of the more critical elements of the whole Tranche 1 is the ability to move, and not have this power get constrained into North Dakota.

0:23:41
(Speaker Chris Hanson)
I also point out that he was the one that pointed out about how this is kind of basically a leg in the line of the Coyote to Maple River and the Ellendale to Big Stone line, so this connects up those lines. **I pointed out they looked at five alternatives to this, but all six, all proposals included the Jamestown to Ellendale line.** So, he does say too, Mr. Donor identifies that these projects will provide more reliable and efficient delivery of energy from low cost regionally cited generators. He further notes that this build-out will, quote, **"allow for the continued interconnection to new generation resources in areas that offer higher capacity factors for intermittent resources such as wind generation."**

0:24:40
(Speaker Chris)
So he specifically called out that they see that this is an opportunity to connect up more wind generation. In other words, it creates additional capacity for the wind to be transmitted from North Dakota eastward. I said additionally, oh no, then I got into basically the response I just talked about. **So, essentially he's saying it's critical to the Tranche 1.**

0:24:59
(Speaker Chris Hanson)
They see it as an opportunity to get more generation resources out of North Dakota, but they specifically did call out more intermittent wind resources as part of that. That was basically his response. And also in there, in the MISO letter, he talks about the specific elements that are being affected in lines, like I said, the transformers, substations and lines that are being affected by the forecasted N-1 and N-1-1s. So that's kind of the MISO letter in a nutshell.

0:25:34
(Speaker Haugen-Hoffart) Adam, do you have anything else to add?

0:25:36
(Speaker Adam) Just to say that I think we have to realize that this is we're dealing with generation futures that are projected in what, 2042? So, this was based on Future 1 each year, each Tranche prior to the LRTP process MISO updates that generation profile based on member plans and IRPs and such. So now we have Future 1-A in which MISO then reassesses what benefits come out of connecting both Tranche 1 as well as in this case, Tranche 2.1. So I would say that an advantage of what we have in terms of how the commission can influence that decision, when we look at the type of resources that are assumed in North Dakota, because it's in 2042, this commission now has the tool, which is an IRP, to influence what type of resource is preferred. So the question is then, what kind of resources hook up into this line is somewhat dependent on commission preference as well. And I would say that will become even more important for Tranche 2.1 and 2.2.

(Speaker Christmann) **Whose IRP has that 800 megawatts of solar in North Dakota that I think this was based on?**

(Speaker Adam) I'd have to take a look.

0:27:24
(Speaker Fedorchak) It wouldn't be just one IRP. Yeah. It's collective. They look at all the company plans. So, some of it might have been specific, but and they try to argue that there are sort of specific locations. But I think it's, I don't know, in our analysis, we think MISO is overstating that, how much specificity they're seeing in the IRPs and um using some judgment as to what resources they're going to end up where in their modeling.

0:28:12
(Speaker Chris) Right. So, these are placeholders and a lot of times these placeholders are a generic technology or technology that doesn't even exist. So, there's room to pivot.

0:28:23
(Speaker Christmann) So how effective is our IRP process if they don't really go by them, they go by whatever placeholders they make up?

0:28:32
(Speaker Chris) Well, the placeholder, let's say for a CT, would be somewhat, it would be dispatchable. So, they might consider that in one IRP, based on their carbon preference, they might consider it powered by hydrogen.

0:28:48
(Speaker Fedorchak)
Um, I think what Randy's getting at is a little broader. They look at the IRPs. And to the extent that the IRPs say where stuff is going to be and when, they use that. The problem is a lot of IRPs aren't that specific. It might be a more general goal. And so, they then have to use judgment as to where they think those are going to end up. And so that's step number one. And step number two, we don't have them yet. So they haven't been able to use any direction from what we've said, because we don't have it.

0:29:23
(Speaker Christmann) But the companies have them?

0:29:25
(Speaker Fedorchak) The companies, they use the company plans. Yep. And anything they've announced from the company.

0:29:27
(Speaker Christmann) And so that's why I was wondering so who's company's IRP would have contained that?

0:29:32
(Speaker Fedorchak) Well, Otter Tail has solar, so does Xcel. It has quite a lot of solar.

0:29:38
(Speaker Christmann) In North Dakota?

0:29:40
(Speaker Fedorchak) Well, wherever. It may or may not be in North Dakota.

0:29:45
(Speaker Haugen-Hoffart) So just for clarification, everyone that's in the MISO, all the companies have submitted an IRP to MISO?

(Speaker Fedorchak) No!

(Speaker Haugen-Hoffart) So then how do they base it on? Is it load growth?

0:29:58
(Speaker Fedorchak)
They base it on whatever IRPs are available. OK? Because not every state does them. There's a broad difference between states. Some states have them, some states don't have them, some companies use them, provide them to us like they have over years, and we've just kind of received them.
So whatever IRPs they have, they use. And then they look at, it's not like a one set plan. You have to get over this idea that there's like one formula for this. It's a bunch of information that they're collecting to try to build this vision of the future as close as they can imagine it to be. So they pull in the IRPs, they pull in any announcements that the companies have made. Like Xcel has said, we're shutting down the Sherco units. That's an announcement, they consider that to be firm, they use that, they put that into their model. And any other company announcement that they have, they plug those in. And then they look at state directives. Minnesota has a law.

0:31:01
(Speaker Fedorchak)
So they assume that the companies in Minnesota have to meet that law. And they bake that into their plans. But maybe the companies haven't said how they're going to do it yet. So that's where they use some of these placement resources to make a judgment for, well, Minnesota has to have, you know, all the companies have to have 30 percent, whatever, 30 percent solar by whatever date, or and so they plug that into their models. And then the models have to pick in the cases where there aren't specific locations identified yet, the models pick where they think those are going to be. And so there's a ton of judgment going into these futures. But at the same time, transmission planning takes a long time and you can't, you, there's no planning for it if you don't do that because it takes so long to develop it and site it and build it that you're always gonna be making it based on what you think the future is going to be.

0:32:02
(Speaker Fedorchak)
So this is the models that they've used for their futures. And then they have, you hear them talk about low end, like the Future 1, Future 2, Future 3. Future 1 is the most conservative. So that looks at like as closely to the state laws, the existing plans of the companies, and their IRPs as much as like they know to be happening, as close to that as they can predict. So it's the most conservative. The least amount of judgment. Future 3 is the most amount of judgment. It looks at trends.

It looks at, like OK, the maximum amount of decarbonization. The maximum amount, or you know a not maximum, but a larger amount of decarbonization, of EV adaption, higher demand growth, all of those sorts of things. That's Future 3.
And then Future 2 is kind of right in the middle. And so there's all this discussion on which future you're using for which tranches. And they're constantly looking at, OK, when we started Future 1, it was like, how many years ago, Adam, did we start with Future 1?

0:33:14
(Speaker Adam) For three, four years.

0:33:15
(Speaker Fedorchak)
Yeah, now we've got actuals to plug in to see like how are we how are we trending? Are we close to Future 1? They're seeing actually that it's trending closer to some of the more aggressive futures. So that's why you see them adopting more aggressive plans for the transmission system. And that might pivot back because you know with demand growth and the reality of the system and the excessive retirements, you might see, I hope we see, companies pulling back and slowing down. And so you might see it going the other way in the next couple of years. So it's a very iterative approach, but also recognizing that, you know, you've got to pull the trigger on some things along the way, and you can't just constantly plan. So...

When I look at this memo from MISO, the one piece that I think is worth pulling out, there's a few kind of conclusions that I reach, but one piece that I think is worth pointing to is on the bottom of page two of the Jeremiah Donor letter, which is the second one back. I don't know if I have the same. Is this a copy that everybody got?

0:34:44
(Speaker Fedorchak)
OK, so page two. **Under reliability benefits, and Randy, I see you've highlighted it. With the second to last paragraph, the last sentence, without the JETx project, these reliability issues would still be present on the local area transmission systems in the future and will need to be mitigated by local reliability projects with a cost borne by the local transmission pricing zones. That's a fancy way of saying one of the benefits of this project is it takes care of these local issues that if we don't have this bigger project cost allocated to the entire MISO-North footprint, we'll be paying for it ourselves.**

0:35:26
(Speaker Fedorchak)
These fixes. Now, they might be smaller. It's not going to be as big of a project. But there still wouldn't be any cost share on those sorts of things. And I think that that's an important consideration for these. **That and the fact that as we see the shrinking capacity availability of dispatchable capacity in the entire MISO footprint right now and the increased demand, are the capacity that North Dakota has is extremely valuable. And this is an outlet for that capacity to places that are going to need it. So it's a highway for it.**

0:36:15
(Speaker Christmann)
And so I'm so frustrated. I don't know what to do with this case, because it's like two things merged and there's never a right place to start to draw a line on something. My frustration is with the allocation of costs. We go through these things and whether it was from way back the Otter Tail and MDU filings that talked about benefits, including distribution of renewable energy, reduced carbon emissions and landowner payments. Or what MISO just got into, which benefits is basically getting more renewables on the system. So it's just not going quite as far. The benefits is largely to the developers, not to North Dakota ratepayers.

0:37:54
(Speaker Christmann)
And to challenge MISO's allocation once we've already approved the CPCN seems backwards and so I sort of feel like almost that in one effort this should be denied and we should be initiating a FERC case or something I don't know how how you really fight that allocation, because there's this, over $10 billion, and then the second tranche, and the third tranche, and the fourth tranche. This is almost, **this tranche is almost $6 a month for those Otter Tail customers.** And I don't know what their customer in Garrison or in Fessenden gets out of this. And I don't know what MDU's customer in Williston or Bismarck gets out of this.

0:38:25
(Speaker Christmann)
Theirs is lesser. It's what, a little over $3, I think. But a FERC case is really expensive, too. I really feel like what MISO is doing here, and I kind of relate back to my old co-op board days, and I know the big difference between co-ops and IOUs. But if somebody wanted to build a house 10 miles from any of our old facilities, except for some old copper line that hadn't been used in 40 years, there would have been some aid to construction. Now, when our team came in over the winter and said, OK, here's the area where we're having problems, we would plan for construction for that summer and maybe rebuild that area because it was having problems. But when we ask for what the reliability issues here are, it's not like they're saying, oh, well, down there in Enderlin, there's just these frequently, frequent voltage issues and things like that. Or over at Valley City, we've had power shortages time and time again. **We had one in Jamestown that the way we often work through our evaluations of reliability would probably just fall as major event days.** I spilt on some lines.

0:40:09
(Speaker Christmann)
I don't know if this would have helped that either. **But this isn't really solving any problems that exist.** It's solving problems that some developers want to add to the system and that will exist once they add their developments to the system. **And I really view this as MISO eliminating the interconnection charges.** We will build this way in advance, just like my example of the guy that wants to build way out on the old copper line, and then our construction group come in and say, we can't afford to do that.

0:40:51
(Speaker Christmann)
The construction would be too much. We'll build the fiber out there. And then when he comes, it won't cost so much for him to hook up. Well, but it costs everybody else. **And to me, that's all we're doing here with this Tranche 1 is eliminating interconnection charge to developers.** And like I say, we approve this, I don't know how we fight this allocation at MISO, because that is really the problem. If the developers were paying for this, I don't think I'd have any objection. But it's a big battle to initiate a case of FERC. And so, some thoughts.

0:41:50
(Speaker Fedorchak)
Well, I certainly understand your frustration and share a lot of it. Maybe I've been beat down because I've been at this longer on this particular Tranche. So I have two thoughts. First of all, I think we should, I would like to talk with our counsel about and get a more clear advice and discussion of options for our legal paths kind of moving forward. Because I think you raise a good point about what we do here and how it affects future issues. My real concerns are with Tranche 2. I think that there's more legitimate benefits to which I just talked about. This project and everything in Tranche 1, which is much more focused on future, on the Future 1 growth scenario, change scenario, which is pretty realistic, I think. So I'm more comfortable with Tranche 1. I'm not, I don't love it and I still would have liked to

generate a PACE?? component in the cost allocation. But that would have, again, not given them 100% of the cost, but a higher share going to the people who are demanding it.

0:43:27
(Speaker Fedorchak)
But that didn't happen. So that said, I think there's much more benefits on this project, in these two projects, or this project, and the whole Tranche 1 for North Dakota. So I separate them a little bit, but
would like to have a discussion with Jack and Brian, and probably our FERC?, um, advisors on our what our paths forward are. Because I think we're seeing more and more concerns on Tranche 2 and want to do whatever we can to preserve maximum rights for um fighting that one. So that's where I'm at.

0:44:27
(Speaker Christmann)
I just want to add one more thing that I forgot. I'm like, tired. It also bothers me on this planning. The modeling, man, we can see way out into the future all this stuff. Within two months, although right to the hour. We can recalculate and come up with even more N-1 and N-1-1 benefits involved here. We can do all that. We can envision 800 megawatts of solar in North Dakota, most of which has never been applied for. We can envision 200 megawatts of natural gas, the company for which has an incentive in place, and they're trying to get out of it. So I'm not saying that is real, real likely at the moment, any time soon. But it's just too much of a burden to calculate in what already exists. **A big user down at Ellendale, I mean, that's only been there a year, it would be overwhelming to try and calculate that in.**

0:45:49
(Speaker Fedorchak) Well, I mean, in their defense, those models, that modeling was occurring probably three or four years before that came online. And those models are, they are massive.

0:46:00
(Speaker Christmann) But this morning we had adjustments to the M&A.

0:46:02
(Speaker Fedorchak) Well, but those were already done. Those models were, those had already been run and they were just pulling from stuff. I'm assuming, I don't know, but.

0:46:10
(Speaker Adam) **But I think they did note that the 2.1, on the current tranche that they actually had taken into account the current Ellendale and the projected plans from Ellendale, into the 2.1, so.**

0:46:21
(Speaker Fedorchak) Yeah.

0:46:22
(Speaker) So they do update them, but as we've noted before, they don't go retroactive on these. They don't go back to Tranche 1 and say, re-look at it.

0:46:30
(Speaker Fedorchak) So, yeah.

0:46:31
(Speaker) And you also have to realize that those contracts can be renegotiated after five years.
(Speaker Fedorchak) True.

0:46:36
(Speaker Christmann) Good point.

0:46:37
(Speaker Haugen-Hoffart) So, Adam or Julie, have you talked within MISO that looking at Tranche 1, if one of the legs is not approved, what that means?

0:46:57
(Speaker Fedorchak) Mm-mm (no)

0:46:59
(Speaker) I haven't.

0:47:00
(Speaker Haugen-Hoffart) It's a package.

0:47:01
(Speaker) Yeah.

0:47:02
(Speaker Fedorchak) Okay. They put it through as a package, and that's the risk of all of these, you know, projects, is they go to the states then, and the states where they're being built. Now we won't have any say on any of the other correct?? ones. But this one is in our territory and with our utilities. So yeah. But it's happened before it happened. There's a line in what's the first? I've lost the acronym for the first build out. What was it?

0:47:28
(Speaker) The MVP?

0:47:29
(Speaker Fedorchak) MVPs. Giggling.
(Speaker) Yeah.

0:47:31
(Speaker Fedorchak) MVP, the first one. I don't, anyway, one of those MVP lines is still in court in Wisconsin. So it's not unprecedented that these projects get tangled up.

0:47:45
(Speaker Haugen-Hoffart) OK. Did we receive the information that was requested from MDU?

0:47:50
(Speaker) Otter Tail responded for both Otter Tail and MDU on the questions.

0:48:03
(Speaker Haugen-Hoffart) Okay, thank you. Anybody have anything else? Our legal counsel has been prepped for the questions that have been asked, so... I know that with certainty. So...

0:48:12
(Speaker Fedorchak) So in terms of next steps, maybe we can look at getting, well, we can, I'll do what I need to do and talk to you guys about my thoughts on next steps. And then we can all do the same, and you guys can decide what the next steps are, I guess. Giggling. I do think we should try to get this moving, though, and not dilly-dally too much longer. So I will try to do my part to make that happen.

(Speaker Christmann) Anything else?

0:49:00
(Speaker Haugen-Hoffart) No, I think I've already directed staff. And I've talked to legal counsel. So we're moving forward.

0:49:17
(Speaker Christmann) Anything else from staff? Okay, this work session is closed. Thanks everyone.

https://apps.psc.nd.gov/cases/pscasedetail?getId=24&getId2=91#

Transcribed with Cockatoo

EXHIBIT 10

OTTER TAIL POWER COMPANY
Case No: PU-24-091

Response to: ND Public Service Commission
Analyst: Christopher C. Hanson
Date Received: August 23, 2024
Date Due: September 13, 2024
Date of Response: September 13, 2024
Responding Witness: Jason Weiers, Manager, Transmission Project Development - (218) 739-8311

Data Request:
What N-1 events were identified as justification for the line and which of these were in ND?

Attachments: 0

Response:

MISO has identified that the Jamestown – Ellendale 345 kV Project, in combination with the Big Stone South – Alexandria – Cassie's Crossing (Big Oaks) 345 kV Project, relieves thermal (i.e. loading) issues on 40 transmission elements and relieves voltage issues on 97 transmission elements during N-1 events.[1]

MISO has provided the study results from Tranche 1 of the Long Range Transmission Plan to the Applicants. The Applicants have carefully reviewed this information and have quantified that there are 2,010 N-1 events in the pre-LRTP Tranche 1 portfolio models that resulted in thermal issues and 1,728 N-1 events in the pre-LRTP Tranche 1 portfolio models that resulted in voltage issues.

Of the 2,010 N-1 events that resulted in thermal issues, 88 N-1 events were located in North Dakota. Likewise, of the 1,728 N-1 events that resulted in voltage issues, 229 N-1 events were located in North Dakota. The specific N-1 events have not been identified by the Applicants due to their sensitive nature as Critical Energy Infrastructure Information (CEII) but can be obtained from MISO once the applicable arrangements are in place for receiving CEII.

[1] See Tables 6-1 and 6-2 on page 43 of the MTEP21 Addendum available on the MISO website at: https://cdn.misoenergy.org/MTEP21%20LRTP%20Tranche%201%20Portfolio626133.zip

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Data Request:
Exclusive of the need to get power out of ND and to feed the Ellendale-Big Stone & the future Big Stone-Sherburne lines, were there other alternatives identified that would have addressed the previously identified issues for less cost?

Attachments: 0

Response:

No. MISO evaluated the following alternatives and concluded that these other alternatives did not address the previously identified issues as effectively as the preferred projects. Therefore, cost estimates were not developed for these alternatives.

Alternative #	Project #1	Project #2	MISO's Conclusions[1]
---	Jamestown – Ellendale 345 kV Line	Big Stone South – Alexandria – Cassie's Crossing (Big Oaks) 345 kV Line	Preferred projects.
1	Jamestown – Ellendale 345 kV Line	Big Stone South – Alexandria 345 kV Line	Without double circuit to Cassie's Crossing (Big Oaks), there are new N-1 issues around Alexandria.
2	Jamestown – Ellendale 345 kV Line	Big Stone South – Hankinson – Fergus Falls 345 kV Line	Creates new issues on the 230 kV and 115 kV system around Fergus Falls.
3	Jamestown – Ellendale 345 kV Line	Big Stone South – Hazel Creek – Blue Lake 345 kV Line	Reduces nearly all overloads of concern, but not to the extent of the preferred project.
4	Jamestown – Ellendale 345 kV Line	Big Stone South – Alexandria 345 kV Line + Big Stone South – Hazel Creek – Blue Lake 345 kV Line	As a combination of alternatives (1 + 3), the south circuit to Blue Lake does not add enough value over the preferred project.
5	Jamestown – Ellendale 345 kV Line	Big Stone South – Breckenridge-Barnesville 345 kV Line	There are still a few key overloads on the key 230 kV system around Wahpeton which are not solved by this alternative.

[1] See pages 41-43 of the MTEP21 Addendum available on the MISO website at: https://cdn.misoenergy.org/MTEP21%20LRTP%20Tranche%201%20Portfolio626133.zip

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Data Request:
Did MISO include the impact of Applied Digital's operation and future plans as well as the prospect of generation west of Fargo into their calculations? If not, have either of your companies attempted to assess this impact?

Attachments: 0

Response:

MISO did not include Applied Digital's operation and future plans in the Future 1 models that were used to identify the Tranche 1 portfolio. The Future 1 models were finalized prior to Applied Digital's commitment to construct new facilities at Jamestown and Ellendale. Neither Otter Tail nor Montana-Dakota have attempted to assess the impact of Applied Digital because neither company has the production cost modeling software tool, PROMOD, to do so. However, Otter Tail and Montana-Dakota have included Applied Digital's operation and future plans in subsequent MISO models once they committed to moving forward with their projects starting in 2022. As such, Applied Digital's load at Jamestown and Ellendale are included in the Future 2A models being evaluated as part of the LRTP Tranche 2.1 portfolio.

Through the model building process for the Tranche 1 portfolio, MISO performed a resource expansion across their footprint based on information gathered from the integrated resource plans of its members. In addition, MISO also added future generation to the models to balance load and generation in a 10-year and 20-year horizon. As part of this resource expansion, the Future 1 models did include the prospect of generation west of Fargo.[1] More specifically, the Applicants' identified that 200 MW of natural gas generation was assumed to have been added near Hankinson and approximately 800 MW of solar generation was assumed to have been added northwest of Fargo near Buffalo, Pickert, and Mapleton.

[1] Series 1 MISO Futures Resource Forecast Siting Locations are found on the MISO website at: https://cdn.misoenergy.org/20211110%20PAC%20Item%2003b%20MISO%20Futures%20Resource%20Siting%20-%20Corrected%20F2%20and%20F3602575.xlsx