

BEFORE THE  
NORTH DAKOTA PUBLIC SERVICE COMMISSION

*MONTANA-DAKOTA UTILITIES CO.*

*Electric Service Agreement – Applied Blockchain, Approval, Case No. PU-22-371*

REVISED DIRECT TESTIMONY  
OF  
ADAM RENFANDT

ON BEHALF OF THE  
NORTH DAKOTA PUBLIC SERVICE COMMISSION  
ADVOCACY STAFF

April 18, 2023

1 Q: Provide your name and qualifications.

2 A: My name is Adam Renfandt, and the Commission has appointed me advocacy  
3 staff in this proceeding. I am a public utility analyst with the Commission, and I  
4 have been an analyst on prior electric service agreements, rate cases, and  
5 advance determination of prudence reviews. I have also advised the  
6 Commission on MISO related transmission topics.

7

8 Q: What is the purpose of your testimony?

9 A: I will provide the commission with an analysis and recommendation concerning  
10 the settlement agreement submitted by Montana-Dakota Utilities Co. (MDU)  
11 and the North Dakota Public Service Commission Advocacy Staff (Staff).

12

13 Q: Briefly describe the ESA that MDU was originally asking the Commission to  
14 approve.

15 A: MDU was seeking Commission approval for an ESA under the High-Density  
16 Contracted Demand Response Rate 45 for a customer with a load up to 180  
17 MW with 171 MW served on an interruptible basis and 9 MW served on a firm  
18 basis. The customer, Applied Digital (Applied), would be served from the  
19 Ellendale 345 kV substation, and it would pay the approximately \$3.4M  
20 transmission extension to the substation. MDU would treat this load as a  
21 wholesale customer, and MDU would pass MISO transmission and market  
22 charges directly to Applied. MDU has no investment to serve Applied, since the  
23 customer paid for the incremental transmission investment.

24

25 Q: Please summarize the settlement.

26 The settlement provides for [Trade Secret Begins] [REDACTED] [Trade Secret Ends] of  
27 the margin going back to ratepayers with interest on the balance accruing equal  
28 to the three-month treasury yield, a study conducted to determine the effect of  
29 this load on ND ratepayers' fuel and purchased power costs, and confirmation  
30 that all MISO charges would be passed through to the customer. MDU has

1 confirmed that the addition of this load will not impact jurisdictional allocators,  
2 and if it did, they shall not seek regulatory recovery for the resultant change.  
3 However, nothing precludes MDU from filing an application with the  
4 Commission to update the jurisdictional allocators or amend the ESA if ordered  
5 by another state. Another provision of the settlement provides that when it  
6 comes to disconnecting Applied and removing the installed facilities to serve  
7 Applied, MDU will not seek regulatory recovery if removal costs exceed salvage  
8 value.

9  
10 Q: How is this load registered with MISO, and how is the firm portion of the load  
11 recovered?

12 A: 171 MW of the load would be registered as a load modifying resource  
13 (interruptible) with 9 MW of the load on a firm basis. Applied is also subject to  
14 [Trade Secret Begins] [REDACTED] [Trade Secret Ends] of curtailment over a  
15 period of a year, which would be at the direction of MDU. Applied would also  
16 follow all directives to interrupt its load if ordered by MISO during emergencies.  
17 Applied would be responsible for the cost to procure the firm 9 MW plus the  
18 planning reserve margin. MDU intends to charge Applied for the firm load at a  
19 negotiated rate, or MDU could instead sell its own excess zonal resource  
20 credits (ZRC), if available, or purchase the ZRCs from the MISO Planning  
21 Resource Auction (PRA). If MDU chooses to sell its own ZRCs or procure them  
22 in MISO's PRA, the price in either case would be the Zone 1 clearing price.

23  
24 Q: How does the addition of the Applied load benefit MDU's existing ratepayers?

25 A: Applied would pay all MISO transmission and market charges, including its  
26 portion of MDU's Attachment O transmission investments. This represents a  
27 [Trade Secret Begins] [REDACTED] [Trade Secret Ends] per year reduction in  
28 transmission rates that otherwise would have been collected from existing  
29 ratepayers, or a \$35.16 per year reduction to the average residential bill that  
30 uses an average of 894 kwh per month. [Trade Secret Begins] [REDACTED]

1 [REDACTED]  
2 [REDACTED] [Trade Secret Ends]. This would be  
3 credited back to customers via MDU's transmission rider.

4  
5 Q: How else does the addition of this load benefit MDU's existing customers via  
6 the margin sharing mechanism, and is it reasonable?

7 A: MDU negotiated [Trade Secret Begins] [REDACTED]  
8 [Trade Secret Ends] MDU collects from Applied for providing the service in the  
9 ESA, and therefore this margin is based on Applied's load. The margin sharing  
10 per the settlement splits the margin among MDU, Dakota Valley Coop, and  
11 ratepayers. Ratepayers are receiving [Trade Secret Begins] [REDACTED] [Trade Secret  
12 Ends] of the margin, or approximately [Trade Secret Begins] [REDACTED] [Trade  
13 Secret Ends] per year assuming a 95% load factor. The remaining [Trade  
14 Secret Begins] [REDACTED] [Trade Secret Ends] of the margin will go back to MDU and  
15 Dakota Valley Coop with Dakota Valley Coop getting [Trade Secret Begins] [REDACTED]  
16 [REDACTED] [Trade Secret Ends]. At a 95% load factor, this would represent  
17 approximately [Trade Secret Begins] [REDACTED] [Trade Secret Ends] per year going  
18 to MDU and [Trade Secret Begins] [REDACTED] [Trade Secret Ends] per year going  
19 to Dakota Valley Coop. I believe this amount leaves MDU with a financial  
20 incentive to further explore such opportunities and balances the parties'  
21 interests while offering a return to the cooperative as an affected party that  
22 withdrew its objections to the certificate of public convenience and necessity in  
23 cases PU-22-366 and PU-22-370.

24  
25 In total, between the reduction in transmission investments that would  
26 otherwise be recovered from existing ratepayers and the margin ratepayers  
27 would receive, the total ratepayer benefit is approximately \$13.2M per year  
28 assuming Applied's load factor is 95% with a [Trade Secret Begins] [REDACTED]  
29 [REDACTED] [Trade Secret Ends]. For the average residential electric  
30 customer using 894 kwh per month, this represents an approximately \$77.64

1 per year billing reduction (\$6.47 per month). These saving will vary with both  
2 the load factor assumed for the margin sharing as well as with the monthly peak  
3 loads that spread the transmission investment over a broader load base.

4

5 Q: How will the addition of this load impact MDU's jurisdictional allocations?

6 A: MDU proposes not to change the jurisdictional allocators based on the load  
7 addition. If MDU were to include the volumes of this load into the calculation of  
8 the ND jurisdictional allocator, there could be a sizable increase in costs  
9 allocated to ND. However, if for some reason the ND allocator did change from  
10 this load addition, the settlement provides that they shall not seek regulatory  
11 recovery for the resultant change. However, nothing precludes MDU from filing  
12 an application with the Commission to update the jurisdictional allocators or  
13 amending the ESA if ordered by another state.

14

15 Q: Does this ESA or the settlement have provisions that serve to protect  
16 ratepayers' interests in other ways?

17 A: The ESA requires that a security deposit be posted, the size of which is  
18 recalculated on an annual basis, and the payments made from the customer  
19 are settled on a frequent basis. Furthermore, the settlement provides that when  
20 disconnecting Applied and removing the installed facilities to serve it, MDU will  
21 not seek regulatory recovery if the removal costs exceed the salvage value.

22

23 Q: How will this load impact the cost to serve existing ratepayers?

24 A: In a data request, MDU acknowledged that the addition of this load will increase  
25 local area LMPs. This would mean the cost of MDU's fuel and purchased power  
26 may increase, and hence the amount existing ratepayers pay for electricity.  
27 However, Applied can also voluntarily curtail their load during times of high  
28 prices, which may mitigate some adverse impacts to pricing pressure to other  
29 MDU customers. Furthermore, the area is known for frequent generation  
30 curtailment that may now be able to generate during those hours, when their

1 generation may have been otherwise unable to dispatch. For instance, in 2022,  
2 approximately 45% of the hours at the Ellendale pricing node experienced  
3 negative day-ahead pricing. Given the potential to impact the transmission  
4 system by adding loads of this magnitude, MDU has agreed to study the  
5 potential impacts this load addition would have on ratepayers' fuel and  
6 purchased power. The cost up to a certain dollar value would be split equally  
7 out of MDU's and ratepayers' margin. Any cost over that amount would come  
8 out of MDU's margin. Furthermore, if the Commission orders additional future  
9 studies, MDU agrees that costs will be allocated in the same manner.

10

11 Q: Is this load paying for any rider revenues or the integrated system costs beyond  
12 the MISO charges and investments?

13 A: No. Applied is not paying any costs outside the pass-through MISO  
14 transmission and MISO market charges. MDU considers this customer to be a  
15 wholesale customer that is paying the MISO charges versus an embedded  
16 retail rate. They connect directly into the 345 kV Ellendale substation in an area  
17 MDU acknowledges has over 1000 MW of wind assets, which are not owned  
18 by MDU, and Applied is not using or paying for MDU's distribution system.

19

20 Q: Does this conclude your testimony?

21 A: Yes it does.