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400 North Fourth Street  
Bismarck, ND 58501  
701-222-7900

April 17, 2023

Executive Secretary  
North Dakota Public Service Commission  
600 East Boulevard Ave. Dept. 408  
Bismarck, ND 58505-0480

**Re: Direct Testimony – Public Document  
Case No. PU-22-371**

Montana-Dakota Utilities Co. herewith electronically submits the Public Document – Not Public (or Privileged) Data has been excised regarding direct testimony of Travis R. Jacobson, Darcy J. Neigum, and Larry Oswald.

Sincerely,

*/s/ Travis R. Jacobson*

Travis R. Jacobson  
Director of Regulatory Affairs

Attachments

MONTANA-DAKOTA UTILITIES CO.

Before the Public Service Commission of North Dakota

Case No. PU-22-371

Direct Testimony  
of  
Travis R. Jacobson

1 **Q. Would you please state your name and business address?**

2 A. Yes. My name is Travis R. Jacobson, and my business address is  
3 400 North Fourth Street, Bismarck, North Dakota 58501.

4 **Q. What is your position with Montana-Dakota Utilities Co.?**

5 A. I am the Director of Regulatory Affairs for Montana-Dakota Utilities  
6 Co. (Montana-Dakota or Company).

7 **Q. Would you please describe your duties as Director of Regulatory  
8 Affairs?**

9 A. I am responsible for the development and implementation of  
10 Company objectives and policies with respect to rate structure, pricing  
11 policies, cost of service studies, fuel cost adjustments, purchased gas cost  
12 adjustments and gas tracking adjustments in each of the jurisdictions in  
13 which Montana-Dakota operates.

14 **Q. Would you please describe your education and professional  
15 background?**

16 A. I graduated from Minot State University with a Bachelor of Science  
17 degree in accounting and I am a Certified Public Accountant (CPA). In

1 June 2019, I completed the Utility Executive Course at the University of  
2 Idaho in Moscow, Idaho. I started my career with Montana-Dakota in  
3 1999 as a financial analyst in the Financial Reporting area and during my  
4 tenure with the Company have held positions of increasing responsibility,  
5 including Supervisor, Financial Reporting & Planning and Manager,  
6 Financial Reporting & Planning and Manager, Regulatory Affairs before  
7 attaining my current position.

8 **Q. Have you testified in other proceedings before regulatory bodies?**

9 A. Yes. I have previously presented testimony before this  
10 Commission, the Public Service Commissions of Montana and Wyoming,  
11 and the Public Utilities Commissions of Minnesota and South Dakota.

12 **Q. What is the purpose of your testimony in this proceeding?**

13 A. The purpose of my testimony is to provide support for the April 17,  
14 2023 Settlement Agreement (April 17 Agreement) which establishes a  
15 sharing of the Applied Digital margin. I also sponsor CONFIDENTIAL  
16 Exhibit No.\_\_(TRJ-1)

17 **Q. Please describe the Application.**

18 A. Montana-Dakota filed an electric service agreement (ESA) between  
19 the Company and Applied Digital (formerly known as Applied Blockchain)  
20 (Applied) on September 21, 2022 in this proceeding. The ESA outlines  
21 the negotiated terms of the agreement between Applied and Montana-  
22 Dakota and is fully described in the testimonies of Messrs. Neigum and  
23 Oswald.



█ [REDACTED]

█ [REDACTED]

█ [REDACTED]

4 [REDACTED]

5 Q. Please discuss summarize the expected impact on Montana-Dakota's  
 6 integrated system customers and North Dakota customers and  
 7 discuss each of the charges noted above.

█ A. The following table provides [REDACTED]

█ [REDACTED]

█ [REDACTED]

█ [REDACTED]

[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

**Total Customer Benefit** **\$15,775,776**  
**North Dakota Customers** **\$13,239,852**

12

Residential Rate Impact	Monthly Impact	Annual Impact
Average Monthly Kwh	894	
TCA Credit	\$2.93	\$35.16
Margin Sharing Credit	3.54	42.48
	<u>\$6.47</u>	<u>\$77.64</u>

13

■ As shown in the tables above, Montana-Dakota [REDACTED]  
■ [REDACTED]  
■ [REDACTED]  
■ [REDACTED]  
■ [REDACTED]  
■ [REDACTED]  
■ [REDACTED]  
■ [REDACTED]  
■ [REDACTED]  
■ [REDACTED]  
■ [REDACTED]  
■ [REDACTED]  
■ [REDACTED]

12 [REDACTED] In that filing, the Settling Parties agreed to establish a  
13 sharing that considers 1) customers; 2) impacted parties; and 3) the  
14 Company.

15 **Q. How does the Margin Sharing achieve a balance?**

16 A. [REDACTED]

■ [REDACTED] Rate 45 customers are much different than all other customers.  
18 For example, every other customer's load is considered in the  
19 determination of the cost of its respective extension agreement. Rate 45  
20 customers must pay 100% of the cost of the extension. The reason that is  
21 an important distinction is that every other customer has an associated  
22 investment upon which Montana-Dakota includes in rate base and  
23 includes the associated costs in retail rates whereas Rate 45 customers

1 do not create a financial burden which would be recovered through retail  
2 rates.

3 During the December 19, 2022 Public Convenience and Necessity  
4 hearing in Case Nos. PU-22-366 and PU-22-370, the Commission urged  
5 the parties (Montana-Dakota and Dakota Valley) to consider all those  
6 involved and be good neighbors and work together throughout this  
7 process. After considerable collaboration, Montana-Dakota and Dakota  
8 Valley agreed to service territory boundaries and a sharing of any margin  
9 retained by the Company. Montana-Dakota asserts that providing Dakota  
10 Valley a share of the Company transaction charge along with certain  
11 territorial concessions adequately addresses the Commission's concerns.

12 **Q. You have covered customer and impacted parties. Will you now**  
13 **discuss the Company?**

14 A. Yes. As noted above, Montana-Dakota established Rate 45 such  
15 that the investment to serve these unique customers will not add to rate  
base. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

23 [REDACTED]

1                   The Company's Rate 45 tariff was purposely established to result in  
2                   no rate base, which is the Company's traditional vehicle for earning a  
3                   profit. In the absence of the inclusion of rate base, the Margin Sharing  
4                   proposal provides a portion of the margin to allow the Company to earn a  
5                   profit. Potentially more importantly, the ability to retain a portion of the  
6                   margin will serve as an incentive to work diligently to find creative  
7                   opportunities to attract and retain high value customers, such as Applied,  
8                   that provide very important direct benefits to Montana-Dakota's  
9                   customers. When coupled with the associated benefits that these high  
10                  value customers bring to the wind generators in the Ellendale area, the  
11                  local communities and the State of North Dakota; the proposed Company  
12                  transaction margin retained by Montana-Dakota becomes a small but very  
13                  important part of the process.

14   **Q.    How do you propose the margin sharing will work in practice?**

15   A.           Under the proposed Margin Sharing Credit (MSC) mechanism,  
16                  Montana-Dakota would file annually, no later than February 1, an annual  
17                  Rate 45 margin sharing report. Within the report, the total margin collected  
18                  under Rate 45 would be reported, along with the amount to be shared with  
19                  the Company's North Dakota electric customers. The total margin sharing  
20                  amount would then be allocated to the Company's various rate classes  
21                  based on the transmission allocation factor from Montana-Dakota's most  
22                  recent North Dakota general electric rate case. A per unit credit would  
23                  then be determined by dividing each rate class's margin sharing amount

1 by the twelve month forecasted volumes for each rate class. The MSC  
2 would be reflected as a separate line item on each customer's bill based  
3 on the usage for that month. Upon Commission approval, Montana-  
4 Dakota would provide the credit based on each customer's usage for the  
5 following twelve months.

6 The margin sharing amount payable to Dakota Valley would be  
7 made within 30 days of Commission approval.

8 Following the first year of the MSC, the annual report would also  
9 include any prior period over or under collected balances.

10 If approved, the first MSC would require at least 30 days from the  
11 date of Commission approval to implement the separate line item on  
12 customers' bills. Starting with the second MSC report, the new per unit  
13 credit could be implemented the first day of the month following  
14 Commission approval.

15 **Q. You mentioned the margin would not be credited to customers until**  
16 **the following year. Will you add interest to the funds held balance?**

17 A. Yes. Montana-Dakota proposes to calculate interest on the  
18 unrefunded balance on a monthly basis based on the prior month's ending  
19 balance. Similar to other similar refunding mechanisms used by the  
20 Company, the Three Month Treasury Rate, as updated each month,  
21 reflects a reasonable interest rate and closely matches the interest rate  
22 that customers would be able to earn if they had received the funds rather  
23 than waiting.

1 **Q. Please describe your sponsored exhibit.**

2 ■ A. CONFIDENTIAL Exhibit No.\_\_\_\_(TRJ-1) summarizes [REDACTED]

3 [REDACTED]

4 **Q. Please summarize your testimony.**

5 A. Montana-Dakota has very deliberately prepared its Rate 45 tariff  
6 and actively supported this tariff through the approval process with the  
7 North Dakota Commission. Similarly, an ESA was negotiated in good faith  
8 that provides significant benefits to the Company and its customers while  
9 allowing Applied to build and operate its facilities and create economic  
10 development in a rural area of North Dakota that would not otherwise see  
11 such an opportunity.

12 The ESA was crafted in such a way as to insulate North Dakota  
13 electric customers from potential financial risks and reward them  
14 generously. The Margin Sharing proposal extends the reward to  
15 customers, Dakota Valley and provides an economic incentive to the  
16 Company.

17 **Q. Does this complete your direct testimony?**

18 A. Yes, it does.

MONTANA-DAKOTA UTILITIES CO.

Before the Public Service Commission of North Dakota

Case No. PU-22-371

Direct Testimony

Of

Darcy J. Neigum

1 **Q. Please state your name and business address.**

2 A. My name is Darcy J. Neigum and my business address is 400  
3 North Fourth Street, Bismarck, North Dakota 58501.

4 **Q. By whom are you employed and in what capacity?**

5 A. I am the Director of System Operations and Planning for Montana-  
6 Dakota Utilities Co. (Montana-Dakota).

7 **Q. Please describe your duties and responsibilities with Montana-  
8 Dakota.**

9 A. I have managerial responsibility for overseeing the day-to-day  
10 operations of the Company's electric control center and system operations  
11 and planning department.

12 **Q. Please outline your educational and professional background.**

13 A. I hold a bachelor's degree in Electrical and Electronics Engineering  
14 from North Dakota State University as well as a master's degree in  
15 Business Administration from the University of Mary. I have worked for  
16 Montana-Dakota and MDU Resource Group, Inc. for twenty-seven years

1 with the last fourteen years managing the system operations & planning  
2 department for Montana-Dakota.

3 **Q. What is the purpose of your testimony in this proceeding?**

4 A. I will provide support for the Company's application for approval of  
5 the Electric Service Agreement (ESA) for the Applied Digital Ellendale  
6 Data Center (Ellendale Data Center) under the Company's approved Rate  
7 45 Tariff for High Density Contracted Demand Response service.

8 **Q. Can you describe the rate the Ellendale Data Center will pay under  
9 the ESA and Montana-Dakota Rate 45?**

10 A. The rate for the Ellendale Data Center is set based upon Montana-  
11 Dakota's Rate 45 Tariff. This approach provides a more competitive rate,  
12 than the Company's Tariff Rate 30 and Rate 38 for interruptible high  
13 density data center loads which minimizes risk and provides significant  
14 value to Montana-Dakota's other customers.

█ [REDACTED]

█ [REDACTED]

█ [REDACTED]

█ [REDACTED]

█ [REDACTED]

█ [REDACTED]

█ [REDACTED]

█ [REDACTED]

█ [REDACTED]

23 [REDACTED]







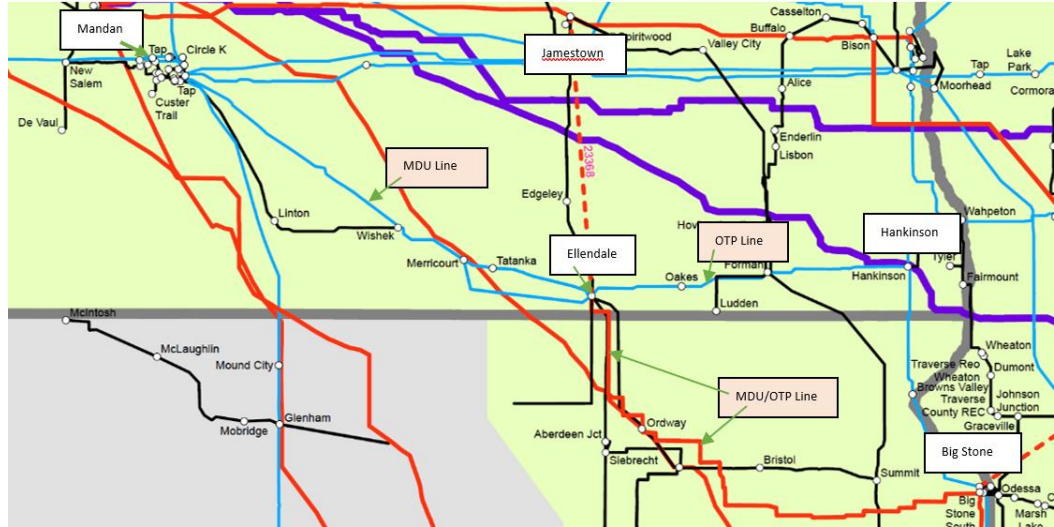


1 generation fleet and any power purchase agreement that the Company  
2 has.

■ ■ [REDACTED]  
■ [REDACTED]  
■ ■ [REDACTED]  
■ [REDACTED]  
■ [REDACTED]  
■ [REDACTED]  
■ [REDACTED]  
9 [REDACTED]

10 **Q. Can you describe the MISO transmission system in the Ellendale**  
11 **area?**

12 **A.** The MISO transmission system in the Ellendale area consists of a  
13 230kV line that Montana-Dakota owns which runs from the Mandan  
14 Substation to Ellendale, a 230 kV line that Otter Tail Power Company  
15 (Otter Tail) owns that runs from Ellendale to Hankinson, and a 345 kV line  
16 that Montana-Dakota and Otter Tail jointly own which runs from Ellendale  
17 to Big Stone, SD. See Figure 1 – Ellendale Transmission Map.



1

2

Figure 1 – Ellendale Transmission Map

3

**Q. How much wind generation is currently installed between Mandan, ND and Big Stone, SD?**

4

5

A. There is currently 1,100 MWs of wind generation on-line between Mandan and Big Stone. Another 250 MWs of additional wind generation has received a MISO interconnection agreement and a North Dakota Public Service Commission siting certificate in this area.

9

10

Montana-Dakota is also a joint owner of the 475 MW coal-fired power plant located at Big Stone.

11

**Q. Does Montana-Dakota own any of this wind generation in the Ellendale area?**

12

13

A. No.

14

**Q. Does Montana-Dakota have any load located in the Ellendale area?**

15

A. Montana-Dakota has a peak winter load in the Wishek and Ellendale area of 20 MWs and a peak summer load of 10 MWs.

16

1 **Q. Does the Ellendale area experience negative MISO market pricing?**

2 A. Yes, with the excess wind generation and transmission outages in  
3 the area, MISO uses an energy market pricing signal to curtail wind  
4 generation to maintain system reliability in the area which creates a  
5 negative pricing situation.

■ ■ [REDACTED]

■ [REDACTED]

■ ■ [REDACTED]

■ [REDACTED]

10 [REDACTED]

11 **Q. Does Montana-Dakota's other customers see negative pricing  
12 associated with their load?**

13 A. Yes.

14 **Q. Do Montana-Dakota's other customers receive the benefits of MISO  
15 negative pricing in their area?**

16 A. Yes, Montana-Dakota passes along the benefits for the MISO  
17 MDU.MDU market prices, even negative pricing, to its other customers  
18 through the Fuel & Purchase Power Adjustment Rate 58.

19 **Q. Do Montana-Dakota's other customers have to share the negative  
20 pricing with anyone else or denied this benefit?**

21 A. No, Montana-Dakota's customers receive the full benefit of any  
22 negative pricing that MISO assigns to its load.





1 **Q. Does MISO have any plans to reduce congestion in the area?**

2 A. MISO studied and approved a Long Range Transmission Plan for a  
3 new 345kV line between Ellendale and Jamestown, ND. This project will  
4 come online at the end of 2028 at the earliest.

5 **Q. Is more generation looking to interconnect into this area?**

6 A. Yes. The current MISO Interconnection queue has an additional  
7 1,400 MWs of wind generation seeking interconnection service in the  
8 Ellendale Area<sup>1</sup>.

■ ■ [REDACTED]

■ [REDACTED]

■ ■ [REDACTED]

■ [REDACTED]

■ [REDACTED]

14 [REDACTED]

15 **Q. Do Montana-Dakota's other customers have future exposure  
16 associated with this new data center load?**

17 A. No.

18 **Q. Is Montana-Dakota adding any addition staffing to support the data  
19 center?**

20 A. No.

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<sup>1</sup> MISO Interconnection Queue – Active Projects Map.  
<https://giqueue.misoenergy.org/PublicGiQueueMap/index.html>



█ [REDACTED]

█ [REDACTED]

3 [REDACTED]

4 **Q. Does Montana-Dakota's other customer load receive any reliability**  
5 **benefits for the Ellendale Data Center?**

6 A. In the case of reliability benefits that the data center provides to the  
7 Ellendale Area, this has the potential to avoid a future reliability project  
8 associated with modeled cases of high system voltage levels in the area  
9 without the data center load.

10 **Q. Who would be responsible to pay for these future reliability projects**  
11 **if one was needed in the future?**

12 A. These costs would either be paid for by Montana-Dakota's  
13 customers as a MISO baseline reliability project, as part of a generator  
14 interconnection network upgrade project, or allocated to the broader MISO  
15 system load if identified for mitigation as part of a Long Range  
16 Transmission Project.

17 Any system reliability issues mitigated by a MISO Long Range  
18 Transmission Project would be paid for by all qualifying MISO load under  
19 a MISO Schedule 26A charge, which would include the Ellendale Data  
20 Center load.

- ■ [REDACTED]
- [REDACTED]
- [REDACTED]
- ■ [REDACTED]
- ■ [REDACTED]
- [REDACTED]
- ■ [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- ■ [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- ■ [REDACTED]
- [REDACTED]
- ■ [REDACTED]
- [REDACTED]
- ■ [REDACTED]
- [REDACTED]
- ■ [REDACTED]
- [REDACTED]
- 22 ■ [REDACTED]

- ■ [REDACTED]
- ■ [REDACTED]
- [REDACTED]
- 4 [REDACTED]
- 5 Q. Does this conclude your direct testimony?
- 6 A. Yes, it does.

MONTANA-DAKOTA UTILITIES CO.

Before the Public Service Commission of North Dakota

Case No. PU-22-371

Direct Testimony

Of

Larry Oswald

1 **Q. Please state your name and business address.**

2 A. My name is Larry Oswald, and my business address is 400 North  
3 Fourth Street, Bismarck, North Dakota 58501.

4 **Q. By whom are you employed and in what capacity?**

5 A. I am the Director Business Development & Energy Services for  
6 Montana-Dakota Utilities Co. (Montana-Dakota).

7 **Q. Please describe your duties and responsibilities with Montana-**  
8 **Dakota.**

9 A. I have managerial responsibility for overseeing the day-to-day  
10 operations of the Company's Business Development and Energy Services  
11 department which provides the economic analysis for all new customer  
12 growth projects.

13 **Q. Please outline your educational and professional background.**

14 A. I hold a Bachelor of Science degree in Energy Management, with a  
15 minor in Finance from Moorhead State University. I am also a Certified  
16 Energy Manager (CEM) and Certified Demand-Side Management (CDSM)  
17 professional with the Association of Energy Engineers (AEE). I have

1 worked for Montana-Dakota for twenty-four years with the last 6 years  
2 managing the business development and energy services department for  
3 Montana-Dakota.

4 **Q. What is the purpose of your testimony in this proceeding?**

5 A. I will provide support for the Company's application for approval of  
6 the Electric Service Agreement (ESA) for the Applied Digital Ellendale  
7 Data Center (Ellendale Data Center) under the Company's approved Rate  
8 45 Tariff for High Density Contracted Demand Response service.

9 **Q. Can you describe how you worked with and attracted Applied Digital  
10 to the Ellendale location?**

11 A. Montana-Dakota began discussions about potential locations with  
12 Applied Digital (Applied) in April of 2022. Several locations were discussed  
13 across our service territory; however several locations were eliminated  
14 due to cost of upgrades, timing of construction, and a higher potential rate  
15 option(s) that were not economical for Applied.

16 Montana-Dakota continued to look for locations and in early June of  
17 2022 Montana-Dakota proposed the Ellendale location to Applied. Applied  
18 was very interested in this site for several reasons including proximity to  
19 their Jamestown location, initial cost, timing of construction, and lower  
20 potential energy costs in that area.

21 Montana-Dakota and Applied continued discussions on key  
22 commercial terms and the technical requirements resulting in Montana-  
23 Dakota and Applied executing a Letter of Intent (LOI) on June 30, 2022.

1 **Q What was the reason for executing the LOI with Applied?**

2 A. The LOI expressed the parties' mutual interest in developing the  
3 Ellendale Data Center site and would serve as an outline for the key terms  
4 and conditions that would go into an ESA. Each party agreed to negotiate  
5 in good faith under the terms outlined in the agreement.

6 **Q. Has the LOI been filed as an Exhibit in this proceeding?**

7 A. No, the executed ESA superseded the LOI.

8 **Q. What are the requirements for serving a Customer under Rate 45?**

9 A. To qualify for Rate 45, a customer with data center-type facilities  
10 housing high density computer processing technology must have:

- 11 1. an expected demand of at least 10,000 Kw per month  
12 metered at a single delivery point, and
- 13 2. an expected minimum load factor of 85%.
- 14 3. Company must be able to interrupt customer's service under  
15 this rate schedule for up to two hundred hours annually or as  
16 included in the electric service agreement.
- 17 4. The customer shall execute an electric service agreement  
18 with the Company which shall be filed and approved by the  
19 North Dakota Public Service Commission.
- 20 5. The electric service agreement shall have a minimum term  
21 of three years but not exceed five years.
- 22 6. The electric service agreement shall include the following:
  - 23 a. The number of hours a customer may be interrupted  
24 in an annual period.







- ■ [REDACTED]
- [REDACTED]
- ■ [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- ■ [REDACTED]
- ■ [REDACTED]

11 [REDACTED].

12 **Q. Does the data center provide benefits to the local community,**  
13 **county, and State of North Dakota?**

14 A. Yes, the Ellendale data center provides economic development to  
15 the Ellendale area and Dickey County. This includes approximately fifty  
16 high paying jobs and significant property tax base for the data center and  
17 associated equipment. The State of North Dakota also receives income  
18 taxes associated with the data center operation as well as publicity for  
19 more of these types of facilities in the future.

20 **Q. Can you describe how you developed a rate for the ESA under Rate**  
21 **45?**

22 A. The rate for the Ellendale Data Center is set based upon Montana-  
23 Dakota’s Rate 45 Tariff. This approach provides a more competitive rate,





1 Montana-Dakota's other customers also receive a sharing in the  
2 Rate 45 Transaction Charge based upon the margin sharing included as  
3 part of this case.

4 **Q. What would happen if another utility would have been able to provide**  
5 **service to the Ellendale Data Center load instead of Montana-**  
6 **Dakota?**

7 A. Montana-Dakota customers would still receive the MISO Schedule  
8 9 revenues for use of Montana-Dakota's transmission system. The other  
9 charges and revenues would be collected by the other utility. Market  
10 pricing impacts, if any in the Ellendale area would be the same.

11 **Q. What would happen if the data center load moved to another**  
12 **electrical substation in the area but off Montana-Dakota's system?**

13 A. Montana-Dakota's customers would receive no transmission  
14 revenues, market pricing impacts in the Ellendale area would be the  
15 same.

16 **Q. Did Montana-Dakota and Dakota Valley Electric Cooperative (Dakota**  
17 **Valley) enter into a settlement agreement in Case No. PU-22-366 and**  
18 **PU-22-370?**

19 A. Yes.

20 **Q. Does the settlement agreement with Dakota Valley require the**  
21 **parties' to also enter into a Service Area Agreement?**

22 A. Yes.

23 **Q. Has that service area agreement been executed?**

24 A. Yes.

