

MONTANA-DAKOTA UTILITIES CO.  
A Division of MDU Resources Group, Inc.

Before the North Dakota Public Service Commission

Case No. PU-17-\_\_\_

Direct Testimony  
of  
Jordan R. Hatzenbuhler

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

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

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

5 A. I am a Senior Regulatory Analyst in the Regulatory Affairs  
6 Department for Montana-Dakota Utilities Co. (Montana-Dakota), a Division  
7 of MDU Resources Group, Inc.

8 **Q. Would you please describe your duties as a Senior Regulatory  
9 Analyst?**

10 A. I assist in preparing various filings required by state commissions,  
11 class cost of service studies, and the development of rate design.

12 **Q. Would you please outline your educational and professional  
13 background?**

1 A. I graduated from the University of North Dakota in Grand Forks,  
2 North Dakota with a Bachelor of Accountancy degree, and I am a Certified  
3 Public Accountant (CPA). I started my career with  
4 PricewaterhouseCoopers as an audit associate and have since held  
5 multiple positions within MDU Resources Group prior to starting in my  
6 current role in 2015, including: Internal Auditor, Investor Relations  
7 Financial Analyst, and Senior Financial Reporting and Planning Analyst.

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

9 A. The purpose of my testimony is to present the results of the class  
10 cost of service study and to address the effect of the proposed revenue  
11 deficiency of \$5,863,197 on a final basis and \$4,561,074 on an interim  
12 basis, as identified by Mr. Jacobson's direct testimony, on each of the  
13 Company's natural gas rates, including the distribution of the revenue  
14 requirement to the various customer classes.

15 **Q. What statements and exhibits are you sponsoring in this  
16 proceeding?**

17 A. I am sponsoring Statement M, Statement N, Exhibit No. \_\_\_\_ (JRH-  
18 1), and Exhibit No. \_\_\_\_ (JRH-2).

19 **Q. Would you please explain the embedded class cost of service study  
20 contained in Statement M?**

1 A. Statement M contains a summary of the results of the embedded  
2 class cost of service study by the major rate classifications: Residential,  
3 Small Firm General, Large Firm General, Air Force Delivery (Rate 64),  
4 Small Interruptible Sales and Transportation, Large Interruptible Sales and  
5 Transportation, and the Minot Air Force Base Distribution. Statement M,  
6 pages 1 through 4 provides a report entitled "Cost of Service by  
7 Component." This report shows the total dollars and unit cost required  
8 under each rate if the projected rate of return of 7.542 percent were to be  
9 earned for the demand, energy, and customer cost components of each  
10 rate schedule.

11 Statement M, pages 5 through 22, is a report of the projected 2018  
12 rate base and income statement items as allocated to each rate schedule.  
13 The allocator factors are provided in Statement M, Pages 23 through 34.

14 The embedded class cost of service study is based on the  
15 projected natural gas operations results for the 12 months ending  
16 December 31, 2018 as sponsored by Mr. Jacobson.

17 **Q. What were the results of the embedded class cost of service study?**

18 A. The overall North Dakota natural gas rate of return based on  
19 projected 2018 results is 4.850 percent. The rate of return provided by  
20 each customer class are shown below:

1

<b>Customer Class</b>	<b>ROR</b>
Residential Service	3.413%
Small Firm General Service	5.144%
Large Firm General Service	6.634%
Air Force Delivery Service	14.194%
Small Interruptible Sales & Transportation	16.043%
Large Interruptible Sales & Transportation	13.378%

2

3 **Q. How did you determine what costs should be assigned or allocated**  
4 **to each class of customers?**

5 A. The starting point was classifying the functionalized costs by  
6 FERC account for all rate base and income statement items as demand,  
7 energy, or customer related based on the component of service being  
8 provided. Demand-related costs are costs that vary with the demand  
9 imposed by the customer, energy-related costs are costs that vary with the  
10 amount of natural gas used by the customer, and customer-related costs  
11 are fixed costs driven by the number of customers served.

12 Next the plant, expense, and revenue items that were identified as  
13 directly related to a specific class of customers were directly assigned to  
14 the appropriate class. Finally, the remaining costs were allocated using  
15 the various allocation factors shown in Statement M, pages 23 through 34,  
16 on the basis of cost responsibility.

1 **Q. Would you please provide an overview of the allocation process**  
2 **including the rationale underlying the choice of allocation factors?**

3 A. Yes. I will start with the plant in service items on Statement M,  
4 Page 5 taken from the Gas Utility Plant in Service, Statements A and L.  
5 The allocation of distribution plant serves as the basis for allocating many  
6 of the rate base items.

7 Turning now to the distribution plant investment; each distribution  
8 plant account is analyzed and allocated based on the cause for the  
9 investment. Distribution mains, services, and meters represent  
10 approximately 92 percent of the total gross distribution investment;  
11 therefore, the allocation of these three accounts drives the allocation of  
12 the remaining distribution investment. The investment in distribution  
13 mains has been assigned 75 percent to the demand component and 25  
14 percent to the customer component. The amount classified as demand  
15 related was allocated to each rate class based on the design day demand  
16 attributed to each class, and the amount classified as customer related  
17 was allocated to each rate class based on the average number of  
18 customers in each rate class.

19 The investment in services, service regulators, and meters is  
20 related solely to a customer connection; therefore, classified as customer

1 related. Service regulators and meters were allocated to the rate classes  
2 based on Factor 9, which represents a meter weight for each customer  
3 class. The meter weights were derived by comparing the installed cost  
4 per meter for each rate class to the cost necessary to serve residential  
5 customers with the residential class weighted as one. The remainder of  
6 the rate base items is self explanatory with the allocation factor noted for  
7 each line item.

8 **Q. Would you please continue your discussion of the embedded class**  
9 **cost of service study with an explanation of the income statement**  
10 **items in the study?**

11 A. The allocation of the income statement items starts on Statement  
12 M, Page 14 with the allocation of revenues. As shown, sales and  
13 transportation service revenues are directly assigned based on the  
14 revenues produced by each rate class. The other revenues are allocated  
15 based on the source of the revenue item. Each item is shown along with  
16 the allocation factor applied.

17 Operation and maintenance expenses consist of: cost of purchased  
18 gas, production, distribution, customer accounts, customer service and  
19 information, sales and administrative, and general expenses are shown  
20 starting in Statement M, Page 14 as well. The cost of purchased gas is

1 directly assigned to each class based on the gas costs included in the Pro  
2 Forma revenues. The cost of purchased gas is recovered through the gas  
3 cost tracking adjustment and is not recovered through the rates that will be  
4 established in this rate case. The remaining operation and maintenance  
5 expenses are allocated based on cost causation and typically follow the  
6 plant investment previously described in the rate base section. The  
7 remainder of the income statement reflects the allocation of depreciation  
8 expense, taxes other than income, and income taxes as denoted by each  
9 line item.

10 **Q. Can you please explain the rate class labeled as Minot Air Force**  
11 **Distribution found on Statement M?**

12 A. The Minot Air Force Distribution rate class represents the cost of  
13 service associated with the Minot Air Force Distribution system Montana-  
14 Dakota purchased in 2008. The costs associated with Montana-Dakota's  
15 ownership of this system are recovered under a contract with the Minot Air  
16 Force Base and set forth on the Air Force Distribution System Rate 65 rate  
17 schedule authorized by the North Dakota Public Service Commission in  
18 Case No. PU-06-470. Montana-Dakota has included an updated cost of  
19 service analysis in this case to demonstrate that other customers are not

1 subsidizing this investment under the currently effective contract rate  
2 applicable to the Minot Air Force Distribution system.

3 **Q. For what purpose has the embedded class cost of service study**  
4 **been used?**

5 A. The study results have been used to guide the allocation of the  
6 revenue requirement to the various classes as well as the rate designs  
7 applicable to each customer class.

8 **Q. What is the total revenue effect of the proposed gas rate changes?**

9 A. The proposed interim rates will produce additional revenues of  
10 \$4,560,902 or 4.2 percent annually based on the interim level of test  
11 period customers and sales, while the final proposed rates will produce  
12 additional revenues of \$5,868,389 or 5.4 percent annually based on  
13 projected 2018 billing units. Exhibit No. \_\_ (JRH-1) represents summaries  
14 by rate classifications of the proposed interim and final revenue increase  
15 on pages 1 and 2 respectively. The exhibit shows the rate number and a  
16 description along with the revenues calculated under the present and  
17 proposed rates. The amount and percentage increase are also shown for  
18 the proposed revenue increase.

19 **Q. Would you please explain Exhibit No. \_\_\_\_ (JRH-2)?**

1 A. Yes. Page 1 of Exhibit No. \_\_\_\_ (JRH-2) depicts a bill comparison  
2 based on typical monthly consumption levels for an annual period for  
3 Residential customers. As shown in the comparison, the proposed rate  
4 structure will result in an average increase, based on final proposed rates,  
5 of approximately \$2.98 per month for the typical Residential customer  
6 using 91 dk on an annual basis.

7 **Q. What is the percentage of the proposed increase by class of**  
8 **customer?**

9 **A.** The proposed increase to each of the classes is shown in the table  
10 below and on Statement N, page 3:

<i>Class</i>	<i>Increase</i>
Residential	5.9%
Firm General	5.5%
Air Force Delivery	0.0%
Small Interruptible	0.0%
Large Interruptible	0.0%
Overall	5.4%

11 **Q. What are the objectives underlying the allocation of the increase and**  
12 **the rates proposed to recover the revenue requirement?**

13 **A.** The embedded class cost of service study and proposed revenue  
14 allocation embody several of the recognized ratemaking objectives by  
15 their effectiveness in yielding the total revenue requirement under the fair-

1 return standard, fairness of the specific rates in the apportionment of the  
2 total costs of service among the different consumers, and efficiency of the  
3 rate classes. Current rates yield returns in excess of the proposed rate of  
4 return in this case for many of the schedules. It appeared that the  
5 residential and firm general classes were the only classes that required  
6 increases to move these classes towards cost of service. The Company  
7 proposes no decreases at this time because the Residential rate class  
8 calls for an increase of approximately 10 percent, which is nearly double  
9 the overall increase required. Therefore, some mitigation was deemed  
10 necessary. The Company proposes to assign the overall increase  
11 (excluding Flexible Rate customers) of 5.5% to the Firm General rate  
12 class and recover the remaining increase needed from the Residential  
13 rate class. This results in a 5.9% increase for the Residential rate class,  
14 as opposed to the nearly 10% increase called for by the class cost of  
15 service study.

16 **Q. How are you proposing to collect the allocated increase from the**  
17 **residential and firm general classes?**

18 A. I am proposing to collect the entire amount of distribution revenues  
19 assigned to the Residential class (Rates 60 and 90) through the Basic  
20 Service Charge as is currently authorized. As seen on page 4 of

1 Statement N, the Basic Service Charge was increased to \$0.7422 per day.  
2 On a monthly basis a residential customer's Basic Service Charge will  
3 increase from approximately \$19.60 to \$22.58, resulting in an increase of  
4 \$2.98 per customer.

5 The proposed rates reflecting the allocated revenue increase for  
6 the Small Firm General and Large Firm General rates were established  
7 through a two step process. The first step was to establish the Basic  
8 Service Charge by considering the customer costs identified in the  
9 embedded cost of service study, as shown on page 2 of Statement M. As  
10 shown on page 10 of Statement N, the Basic Service Charge was  
11 increased to \$0.70 per day for the Small Firm General rates and to \$2.05  
12 per day for the Large Firm General rates. The second step was to deduct  
13 the revenues to be recovered under the Basic Service Charge and  
14 establish the Distribution Delivery Charge by dividing the revenues  
15 remaining to be collected by the projected 2018 volumes attributable to  
16 the Small and Large Firm General rate schedules. This calculation can be  
17 seen on page 11 of Statement N.

18 **Q. Were additional rate form changes made to rate schedules that were**  
19 **not allocated a revenue increase?**

1 A. Yes. The Basic Service Charge for the Small Interruptible and  
2 Large Interruptible rate schedules were increased in consideration of the  
3 customer costs identified in the embedded cost of service study on pages  
4 3 and 4 of Statement M. The Basic Service Charge for the Small and  
5 Large Interruptible rate schedules was increased to \$190 per month and  
6 \$1,500 per month, respectively. The associated Distribution Delivery rates  
7 were reduced in order for the Interruptible classes to maintain the intended  
8 revenue neutrality. The calculations supporting the proposed rates for the  
9 Interruptible classes can be found on pages 12 through 17 of Statement  
10 N.

11 **Q. How was the proposed interim revenue requirement apportioned**  
12 **among the customer classes?**

13 A. The interim revenue requirement of \$4,561,074, as identified by Mr.  
14 Jacobson's direct testimony, was applied on an equal percentage basis to  
15 all rate schedules, with the exception of Large Interruptible contract  
16 customers, in order to maintain the allocation of revenues authorized in  
17 the last rate case. The interim amount will be billed as a separate line  
18 item on customers' bills based on the application of the interim percentage  
19 of 12.486 to the distribution component amounts billed. The calculations  
20 supporting the application of the interim increase to each class are

1 provided in Appendix C to the Application for Interim Increase in Natural  
2 Gas Rates. Page 2 of Exhibit No. \_\_\_\_ (JRH-2) shows a typical average  
3 residential bill reflecting the proposed interim increase that results in an  
4 average monthly increase of approximately \$2.44.

5 **Q. Does this conclude your direct testimony?**

6 A. Yes, it does.

**MONTANA-DAKOTA UTILITIES CO.  
 GAS UTILITY - NORTH DAKOTA  
 REVENUES UNDER CURRENT AND PROPOSED RATES - INTERIM**

Customer Class/Rate	Projected 2018		Total Proposed Revenue	Proposed Revenue Increase	Percent Increase
	Customers	Dk			
<b>Residential - Rate 60</b>	96,792	8,826,214	\$61,043,418	\$2,842,129	4.9%
<b>Firm General Service - Rate 70</b>	15,560	8,035,663	45,543,560	1,471,573	3.3%
<b>Air Force - Rate 64</b>					
Firm	1	32,523	143,249	1,598	
Interruptible	2	457,577	1,461,611	13,371	
Total Air Force	3	490,100	1,604,860	14,969	0.9%
<b>Small Interruptible</b>					
Sales - Rate 71	92	572,872	2,532,810	103,663	4.1%
Transportation - Rate 81	63	1,104,513	870,115	108,643	12.5%
Total Small IT	155	1,677,385	3,402,925	212,306	6.2%
<b>Large Interruptible</b>					
Sales - Rate 85	0	0	0	0	-
Transportation - Rate 82	6	4,321,943	1,347,706	19,925	1.5%
Total Large IT	6	4,321,943	1,347,706	19,925	1.5%
<b>Total North Dakota</b>	<b>112,516</b>	<b>23,351,305</b>	<b>\$113,169,744</b>	<b>\$4,560,902</b>	<b>4.2%</b>

**MONTANA-DAKOTA UTILITIES CO.  
 REVENUES UNDER CURRENT AND PROPOSED RATES  
 GAS UTILITY - NORTH DAKOTA**

Customer Class/Rate	Projected 2018 1\		Total Proposed Revenue	Proposed Revenue Increase	Percent Increase
	Customers	Dk			
<b>Residential - Rate 60</b>	96,792	8,826,214	\$61,660,006	\$3,458,717	5.9%
<b>Firm General Service - Rate 70</b>	15,560	8,035,663	46,481,691	2,409,704	5.5%
<b>Air Force - Rate 64</b>					
Firm	1	32,523	143,249	0	0.0%
Interruptible	2	457,577	1,461,611	0	0.0%
Total Air Force	3	490,100	1,604,860	0	0.0%
<b>Small Interruptible</b>					
Sales - Rate 71	92	572,872	2,532,810		0.0%
Transport - Rate 81	63	1,104,513	870,115		0.0%
Total Small Interruptible	155	1,677,385	3,402,925	(171)	0.0%
<b>Large Interruptible</b>					
Sales - Rate 85	0	0	0		
Transport - Rate 82	6	4,321,943	1,327,781		
Total Large Interruptible	6	4,321,943	1,327,781	139	0.0%
<b>Total North Dakota</b>	112,516	23,351,305	\$114,477,231	\$5,868,389	5.4%

1\ Statement K, page 5.

**MONTANA-DAKOTA UTILITIES CO.  
 GAS UTILITY - NORTH DAKOTA  
 RATE 60 BILL COMPARISON  
 RESIDENTIAL GAS SERVICE**

Month	Dk	Present Rate		Proposed Rate		Amount of Increase	% Increase
		Basic Service Charge	Cost of Gas	Basic Service Charge	Cost of Gas		
January	16	\$19.97	\$64.18	\$23.01	\$64.18	\$3.04	3.61%
February	15	18.04	60.17	20.78	60.17	2.74	3.50%
March	12	19.97	48.13	23.01	48.13	3.04	4.46%
April	9	19.33	36.10	22.27	36.10	2.94	5.30%
May	5	19.97	20.06	23.01	20.06	3.04	7.59%
June	2	19.33	8.02	22.27	8.02	2.94	10.75%
July	2	19.97	8.02	23.01	8.02	3.04	10.86%
August	2	19.97	8.02	23.01	8.02	3.04	10.86%
September	2	19.33	8.02	22.27	8.02	2.94	10.75%
October	4	19.97	16.04	23.01	16.04	3.04	8.44%
November	10	19.33	40.11	22.27	40.11	2.94	4.95%
December	12	19.97	48.13	23.01	48.13	3.04	4.46%
<b>Total</b>	<b>91</b>	<b>\$235.15</b>	<b>\$365.00</b>	<b>\$270.93</b>	<b>\$365.00</b>	<b>\$35.78</b>	<b>5.96%</b>

Average Increase \$2.98 \$0.00

RATE 60	Current 1/	Proposed
Basic Delivery Charge	\$0.6443	\$0.7422
Cost of Gas	4.011	\$4.011

1/ Rate effective May 1, 2017

**MONTANA-DAKOTA UTILITIES CO.  
 GAS UTILITY - NORTH DAKOTA  
 RATE 60 BILL COMPARISON - INTERIM  
 RESIDENTIAL GAS SERVICE**

<u>Month</u>	<u>Dk</u>	<u>Present Rate 1/</u>	<u>Proposed Rate</u>	<u>Amount of Increase</u>	<u>% Increase</u>
January	16	\$84.15	\$86.64	\$2.49	2.96%
February	15	78.21	80.46	2.25	2.88%
March	12	68.11	70.60	2.49	3.66%
April	9	55.43	57.84	2.41	4.35%
May	5	40.03	42.52	2.49	6.22%
June	2	27.35	29.76	2.41	8.81%
July	2	28.00	30.49	2.49	8.89%
August	2	28.00	30.49	2.49	8.89%
September	2	27.35	29.76	2.41	8.81%
October	4	36.02	38.51	2.49	6.91%
November	10	59.44	61.85	2.41	4.05%
December	12	68.11	70.60	2.49	3.66%
<b>Total</b>	<b>91</b>	<b>\$600.20</b>	<b>\$629.52</b>	<b>\$29.32</b>	<b>4.89%</b>
Average Increase per Month				\$2.44	

<u>Rate 60</u>	<u>Current 1/</u>	<u>Proposed</u>
Basic Delivery Charge	\$0.6443	\$0.6443
Projected Cost of Gas	4.011	\$4.011
Interim Rate		12.486%

1/ Rate effective May 1, 2017