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PREPARED TESTIMONY

Jerry Lein
Case No. PU-13-803

Q. Please state your name and business address.

A. My name is Jerry Lein. My business address is Public Service Commission, State Capitol, Bismarck, North Dakota 58505-0480

Q. Please summarize your education and professional background.

A. In 1985 I received a Bachelor of Science degree in Electrical Engineering from North Dakota State University, where I have also completed graduate courses and worked as an instructor/teaching assistant.

I have been employed as a regulatory analyst for more than 25 years with both the North Dakota Public Service Commission and the Public Utilities Commission of Nevada. I have previously testified before this Commission on several occasions regarding a variety of matters including class cost of service and rate design. I have completed several educational seminars including the NARUC Regulatory Studies Program through the University of Michigan and the NARUC Western Utility Rate Seminar through the University of Utah.

Q. What is the purpose of your testimony?

A. I will address MDU's class cost of service study and rate design proposal.

CLASS COST OF SERVICE STUDY

Q. What is the purpose of a class cost of service study?

A. The purpose of a class cost of service study is to provide an indication of what it costs to provide service to each customer class. This information can be used as a guideline for distributing revenue requirements among the customer classes when seeking a cost basis for rates.

Q. Has the Commission stated how it intends to use cost of service studies in rate cases?

A. Yes, there is Commission precedent in prior rate applications. Consider, for example, Case No. PU-400-91-112 where the Commission stated in its final decision:

"We believe that both fully-distributed embedded class cost of service studies and long run incremental studies may provide useful guidance in designing rates.

1 However, we will continue to use our own judgment considering the evidence,
2 arguments and public policy in a particular case as to an appropriate rate design.
3 We will avoid mechanical application of the results of any given cost study.”

4 Q. Will you briefly describe the mechanics of a class cost of service study?

5 A. Costs are classified as demand, energy, or customer related. Generally, demand
6 costs vary directly with the size of the system peak load. Energy costs vary
7 directly with sales volumes. Customer costs vary directly with the incidence of
8 customers.

9 After all costs have been classified they are allocated to each customer class to
10 recover the total jurisdictional revenue requirement. This serves as a basis for
11 designing rates for each class.

12 Q. Are there any definite rules for applying the cost relationships of capacity, energy,
13 and customer related costs when performing a class cost of service study?

14 A. No. There is generally more than one method for each allocation so that
15 implementation is influenced by the characteristics and judgments of a particular
16 utility. The NARUC has published a cost allocation manual that details commonly
17 used methods.

18 Q. What were the results of your review of the class cost of service study filed by
19 MDU in this proceeding??

20 A. I found that MDU's cost classifications and allocation follow generally accepted
21 principles and practices based on the NARUC Gas Utility Cost Allocation Manual.

22 Q. Did your review identify any areas of concern or controversy?

23 A. Yes. It appears MDU has used the concept of a minimum distribution system to
24 allocate 25% of distribution main investment and operation and maintenance
25 expense to the customer component. The theory is that some minimum-sized
26 system is required to provide service regardless of whether any gas is used and
27 the cost of that minimum system should be classified as customer related.
28 Though the concept is mentioned in the NARUC manual, it has been controversial
29 because there is generally not a strong correlation between number of customers
30 and distribution plant investment. MDU builds and maintains distribution plant to
31 serve a defined service area. In most cases a new service within that area
32 requires only a service line from an existing main, and thus the distribution main
33 costs do not vary with the incidence of customers sufficiently enough to allocate
34 25% to the customer component. Furthermore, for instances where main

1 extensions are needed, MDU has a tariff that requires the customer to directly pay
2 main extension expenses that are not cost justified by projected sales revenues.

3 Q. Has this Commission previously addressed the minimum distribution system
4 issue?

5 A. I believe so. As I recall in previous gas rate cases many years ago the
6 Commission found that distribution costs should not be assigned to the customer
7 component.

8 Q. What effect does the assignment of distribution main expenses to the customer
9 component have on the overall results of the class cost of service study?

10 A. Since customer costs are allocated between the classes based on the number of
11 customers and the residential class has the majority of the customers, the net
12 effect is to shift a larger portion of the revenue requirement to the residential
13 class.

14 Q. Do you have any evidence of this effect on the overall outcome of MDU's class
15 cost of service study?

16 A. Yes, I asked MDU to re-run its study with all distribution costs assigned as
17 demand related based on an assumption that the size and cost of the distribution
18 system is proportional to the area and load capacity it must serve. The results are
19 summarized and compared with MDU's original study below:

20

CLASS RATES OF RETURN

Customer Class	Original Study	Revised
Residential	0.460%	1.411%
Firm General	5.367%	3.867%
Air Force	-1.031%	-1.031%
Small Inteuptible	1.341%	-1.057%
Large Interruptible	12.504%	9.658%

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22 Q. Are you recommending the Commission adopt the revised version of the class
23 cost of service study for purposes of rate design in this proceeding?

24 A. No. I do not believe it necessary for the Commission to adopt either version. I
25 recommend the Commission use this study as it has used past studies. Class
26 cost of service studies should be used as a guideline, and should not be
27 mechanically applied for designing rates.

28

1 **RATE DESIGN**

2 Q. Have you reviewed MDU's proposed rate design?

3 A. Yes.

4 Q. What were your overall objectives when reviewing the proposal?

5 A. Based on several publications as well as my own training and experience with
6 utility rates, I had four overall objectives: (1) rates should be based on or moved
7 towards cost: (2) increases or decreases should be distributed equitably: (3)
8 administering changes should be practical; and (4) rate shock should be avoided.

9 Q. Does MDU's rate design proposal meet these objectives?

10 A. I do not believe the proposal accomplishes equity in distributing the proposed
11 increase between the customer classes. The class cost of service study indicates
12 that the customer classes are all contributing relatively similar levels of return
13 except for a much higher return from the large interruptible class. Therefore, I
14 recommend assigning equal percentage increases to all classes other than the
15 large interruptible class.

16 Q. What do you recommend for the large interruptible class.

17 A. I believe that all customers should share in the burden of a rate increase. In the
18 past I have tried to recommend a general rule of thumb that no customer class
19 receive less than one half or more than twice the overall percentage increase.
20 Therefore, I recommend the large interruptible class be assigned an increase
21 equal to one half the percentage increase assigned to the other classes.

22 **Customer Charges**

23 Q. What is your recommendation regarding MDU's proposal to eliminate the
24 residential Distribution Delivery Charge and recover all non-gas residential
25 revenues through the customer charge?

26 A. I support this change. I think that a similar rate design approved by the
27 Commission for NSP residential customers has worked well. I believe this design
28 works for residential natural gas rates because residential usage is primarily for
29 space heating such that most customers generally use a comparable amount of
30 gas delivered through comparable service facilities. I believe the corresponding
31 customer charge will not be unreasonably high given the benefits of eliminating
32 the distribution delivery charge:

- Utility profits are decoupled from sales volumes, thus eliminating any disincentive for promoting conservation among residential customers.
- Residential billing is simplified by removal of both the distribution delivery volumetric charge and the Distribution Delivery Stabilization Mechanism (DDSM), which is MDU's degree day surcharge adjustment to help offset the revenue effects of colder or warmer than normal winters.
- Seasonal differences in utility revenues and customer bills are evened out as winter gas bills are lessened while summer bills are increased.

Q. What would be the approximate effect on residential bills?

A. MDU estimated that under the settlement with MDU's proposed rate design the customer charge would increase by \$0.2941 per day while the \$0.812 per dk volumetric delivery charge would be eliminated. The overall effect on a typical residential customer using 23 dk in January and 2 dekatherms in July is shown below. Note that I expect the customer charge increase would be somewhat less if my proposed rate spread between the classes were adopted.

Month	Total Bill Change.
January	$.2941*31 - .812*23 = \$-9.55$
July	$.2941*31 - .812*2 = \$7.49$

Q. Do you have any further rate design recommendations?

A. Yes. MDU has proposed to shift a portion of demand related charges for small interruptible customers into the customer charge while also significantly increasing customer charges for large interruptible customers. I am concerned that the resulting customer charges could produce rate shock and discourage customers from taking interruptible service. I agree with MDU's desire to equalize sales and transportation service customer charges, but I recommend limiting the increases:

Monthly Interruptible Customer Charges

	Previous	Proposed	Recommended
Small Interruptible Rate 70	\$100	\$300	\$175
Small Transportation Rate 81	\$150	\$300	\$175
Large Transportation Rate 82	\$725	\$2,200	\$1,000
Large Interruptible Rate 85	\$675	\$2,200	\$1,000

Q. Does that conclude your testimony?

A. Yes, thank you.