

**EXHIBIT
12**

BEFORE THE NORTH DAKOTA PUBLIC SERVICE COMMISSION

Northern States Power Company 2024 Natural Gas)
Rate Increase Application) Case No. 23-367
_____))
_____)

Direct Testimony of
BRADLEY CEBULKO
On behalf of
AARP

July 1, 2024

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1 **I. Introduction**

2 **Q. Please state your name.**

3 A. My name is Bradley Cebulko

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

5 A. I am the founder of CEB Energy Consulting. CEB Energy Consulting provides technical,
6 economic, and policy analysis to public interest organizations who participate in public
7 utility commission proceedings. I have been retained by AARP in this proceeding.

8 **Q. Please summarize your qualifications, experience, and education.**

9 A. I founded CEB Energy Consulting in March 2024. Previously, I was a Senior Manager at
10 Strategen Consulting from 2021 to 2024. At Strategen, I provided technical and policy
11 analysis and testimony on utility regulatory issues including cost of service, rate design, low-
12 income ratepayer issues, capital investment investments, electric and gas long-term planning,
13 performance-based regulation, and new regulatory business models. Prior to joining
14 Strategen, I worked at the Washington Utilities and Transportation Commission (“UTC”) for
15 8 years. From 2013-2016, I was an analyst with the UTC Commission Staff focused on
16 electric and natural gas integrated resource planning (“IRP”), electric and natural gas energy
17 efficiency programs, and new program design and implementation. From 2016-2021, I was
18 an advisor to the Washington State Commissioners, where I led Commissioners’ review of
19 major filings and adjudications, electric and natural gas general rate cases, purchase gas
20 adjustments, rulemakings, and natural gas IRPs.

1 **Q. Have you testified before the North Dakota Public Service Commission previously?**

2 A. No. However, I have testified before public utility commissions in Washington, Oregon,
3 Colorado, Minnesota, Illinois, Michigan, Massachusetts, and Connecticut.

4 **Q. What is AARP's interest in this case?**

5 A. AARP advocates for the needs of people aged 50 and older on a range of issues that
6 impact health, well-being and financial security. That includes advocacy to protect the
7 interests of residential customers of energy, for whom utility costs can represent a significant
8 share of household income. AARP has stated that many of its approximately 84,000
9 members in the state of North Dakota live on fixed incomes, or struggle to make ends meet.
10 They advocate for the adoption of fair and affordable utility rates and reliable service on
11 behalf of their members who are served by Northern States Power Company (NSP).

12 **Q. What is the purpose of your direct testimony and recommendations?**

13 A. The purpose of my testimony is to provide testimony on issues related to the Class Cost
14 of Service Study ("CCOSS") and rate design. My CCOSS testimony discusses various
15 approaches used to classify certain distribution system costs that have been vetted and
16 approved by other states. I discuss the reasonableness of these approaches compared to the
17 approach utilized by NSP and the importance that this classification has on the studies'
18 results. Finally, I discuss how the Commission should consider the reasonableness of each
19 CCOSS model when determining revenue apportionment.

20 **Q. Please summarize your recommendations.**

21 A. I recommend the Commission order the following:

- 1 (1) Modify the Company's proposed CCOSS to classify distribution mains as 100
2 percent demand related.
- 3 (2) Reduce the residential customer charge to \$15.00/month and increase the
4 distribution charge by an offsetting amount,
- 5 (3) If the Commission authorizes lower revenue requirement than requested by the
6 Company, I recommend the Commission reduce the impact to the customer
7 charge rather than to the distribution charge.

8 **II. CCOSS**

9 **Q. What is the purpose of a CCOSS?**

10 A. The purpose of a CCOSS is to determine and then allocate, with as much detail and
11 accuracy as possible, which customer class caused the utility's various embedded costs
12 associated with providing service.

13 **Q. How is a CCOSS performed?**

14 A. A CCOSS has three steps. First, costs are functionalized into various categories. Second,
15 costs are classified as either commodity, demand, or customer. Finally, the costs are allocated
16 to the various customer classes using allocators related to commodity, demand, or customer
17 characteristics.

18 **Q. How are costs functionalized?**

19 A. Utilities functionalize costs using the Uniform System of Accounts as designated by the
20 Federal Energy Regulatory Commission ("FERC"). The utility assigns costs by various
21 functions, such as transmission, production, and distribution. The purpose of the

1 functionalization step is help determine which costs are the joint responsibility of multiple
2 customer classes and which costs can be assigned to a specific customer class.

3 **Q. How are costs then classified?**

4 A. Costs are then classified as a commodity, demand, or customer cost. Commodity costs
5 are classified based on a customer class's energy (therms) usage. Demand costs are classified
6 based on a customer class's contribution to peak demand within the system. There are a
7 number of influences on costs, including the quantity and size of the mains used to construct
8 the distribution system. Finally, customer costs are those required to provide service to
9 customers, regardless of whether the customers consume gas or not. The utility incurs
10 customer costs based on the number of customers.

11 **Q. How are costs allocated once they have been classified?**

12 A. Costs are allocated to each customer class based on the class's contribution to that
13 specific cost. If, for example, the company spends the same amount of time and money on
14 each customer location, regardless of class, then it is appropriate to allocate that cost based
15 on the number of customer locations.

16 **Q. How should a CCOSS analysis be used in a rate case?**

17 A. A CCOSS is a tool and the appropriate starting point for informing rates. However, it is
18 an imprecise tool. A CCOSS necessarily requires numerous subjective determinations that
19 will have significant impacts on the outcomes. For example, in this case, Witness Barthol
20 appropriately recognizes that "distribution costs" are driven by both the number of customers

1 on the distribution system and the capacity requirements they place on the system.¹ The
2 Company then decided to use the a “minimum system methodology” for determining the
3 portion of costs that are demand- and customer-related.
4 However, there are several other recognized methodologies for determining the portion of
5 costs that are demand- and customer-related that are used by public utility commissions
6 across the country. Not all CCOSS models are equivalent – some are better grounded in
7 economic and regulatory theory than others – even if both CCOSS models produce relatively
8 reasonable results.

9 **Q. What methodology does NSP use for determining the portion of costs that are**
10 **demand- and customer related?**

11 A. NSP uses the Minimum Distribution System method.² As witness Barthol describes it, the
12 “method involves comparing the cost of the minimum size of distribution mains used to the
13 cost of the actual sized facilities installed. The cost of the minimum size facilities determines
14 the “customer” component of total costs, and the “capacity” cost component is the difference
15 the total installed cost and the minimum sized cost.”³ NSP assumes that the minimum size
16 necessary is to use pipes with a diameter of 2 inches or less, which is the minimum-sized
17 pipe on it system. However, the Company rightfully recognizes that there is a demand-related
18 element associated with using even the most minimum theoretical design of the system, and
19 thus proposes a demand-adjustment, which shifts some customer-related costs to demand-

¹ Exhibit __ (CJB-1), Schedule 2, page 4.

² Exhibit __ (CJB-1), Schedule 2, page 4.

³ Exhibit __ (CJB-1), Schedule 2, page 4.

1 related. Table # shows the results of the Company's two-step process for classifying
2 distribution main costs.

3 *Figure 1: NSP's Proposed Classification of Distribution Mains*

Cost	Customer	Demand
NSP's Minimum Distribution System Method Costs Results	65.3%	34.7%
NSP's Minimum Distribution System Method Costs Results after Demand-Adjustment	49.2%	50.8%

4
5 **Q. You mentioned that there are several recognized methods for classifying**
6 **distribution costs. Will you please discuss the other methods?**

7 A. Yes. Another commonly used method is the Basic System method, which classifies only
8 plant that varies directly with the number of customers on the system, such as meters,
9 regulators, and service taps, as customer related.⁴ In other words, only costs that can be
10 traced to a specific customers should be assigned as a customer costs because those are the
11 only costs that vary based on the number of customers. The key difference between the Basic
12 System and the Minimum Distribution System methods is the classification of distribution
13 mains. The Basic System method classifies distribution mains as 100 percent demand related
14 as these costs cannot be attributed directly to a customer, because adding one customer to the
15 system would not increase these costs.

16 Another method is the Average and Excess, which classifies the demand portion of
17 distribution mains based on a commodity allocator, such as annual therm consumption or
18 average demand, and non-coincident peak demand. According to the NARUC Electric

⁴ NARUC Gas Manual.

1 Manual, the underlying theory of this method is that a portion of system costs are caused by
2 peak demand, and that other are caused by how the system is utilized, which is related to
3 throughput, or commodity, usage.⁵

4 **Q. Is the Company's Minimum Distribution System method a reasonable method for**
5 **classifying distribution costs?**

6 A. As I have shown, there are several recognized methods for classifying distribution costs
7 each with an underlying theory. Regulatory economist Charles Phillips wrote, "[w]hen the
8 same plant or equipment is used to provide several types of service, there is no one correct
9 way to allocate these cost among the different units of service. Any method of apportionment
10 is subject to dispute."⁶ That is not to say that all methods are created equal and use the same
11 level of subjectivity. Although the Minimum System method can have an intuitive appeal, it
12 is fundamentally based off a hypothetical counterfactual that is not real and is not based on
13 system characteristics. Underpinning the Company's analysis is several subjective
14 assumptions about the engineering of a hypothetical reality and then assigns cost causation
15 based on this imaginary world. Thus, the NARUC Gas Manual states that assigning a portion
16 of the costs associated with distribution system "can be controversial."⁷

17 On the contrary, the Basic System method is based on actual system data – number and
18 cost of meters, regulators, etc. – and assigns cost causation accordingly. The Basic System
19 method reduces the number of subjective decisions a utility needs to make, which is in the

⁵ NARUC Electric Manual, page 49.

⁶ See Charles R. Phillips Jr., *The Regulation of Public Utilities* 438 (1993).

⁷ NARUC Gas Manual, page 22.

1 public interest, because a utility has an economic incentive to classify costs as customer
2 rather than demand related.

3 **Q. Why does a utility have an economic incentive to overly-classify costs as customer**
4 **rather than demand related?**

5 A. By overly classifying costs as customer-related, the CCOSS will shift relatively more
6 costs onto residential customers. All else equal, residential customers are more numerous,
7 stable, and lower risk because they produce a consistent revenue stream. Residential
8 customers have relatively inelastic demand as compared to the other customer classes. In
9 other words, residential customers are less risky and more stable than the other customer
10 classes.

11 **Q. Why do you recommend using the Basic Customer approach for classifying**
12 **distribution related costs?**

13 A. There are two main reasons that cost analysts find it reasonable to classify the distribution
14 system as 100 percent demand costs. First, distribution system equipment is not designed,
15 and will not be installed, if it is incapable of serving peak demand reliably and safely. This
16 indicates that the cost of distribution equipment is caused by the requirement to meet peak
17 demand. That is, the distribution mains are designed to meet peak demand of a group of
18 customers, and from an economic perspective demand reflects how the system is utilized by
19 customers. Furthermore, mains should not be classified as customer-related because adding a
20 single customer to the system would not increase main costs.

21 A second, similar explanation is that demand costs are the fixed costs that the utility
22 incurs to be ready to provide service. According to the late regulatory economist Alfred

1 Kahn, demand costs are those caused by “the utility’s readiness to serve on demand. This
2 readiness to serve is made possible by the installation of *capacity* . . . the fixed, capital costs.
3 . . . And the proper measure of that responsibility is the proportionate share of each customer
4 in the total demand placed on the system at its peak.”⁸ It is the customer’s demand that
5 causes the fixed costs on the distribution system and not the numerical addition of that
6 customer to the system.

7 **Q. What does the Company’s inclusion of a Demand Adjustment to the Minimum**
8 **System Study say about the methodological soundness of the Minimum System**
9 **approach?**

10 A. The Company’s adoption of a demand adjustment indicates that the Company
11 understands that the results of the Minimum System Study does not accurately reflect actual
12 cost causation. Witness Barthol testifies that although the Minimum System Study identifies
13 distribution mains of two inches or less as its theoretical minimum system, “there is a
14 difference in the extent to which that portion of the pipeline capacity is used by different
15 customer classes.”⁹ The Company then calculates what it refers to as the Average Capacity
16 and the Excess Capacity costs, an exercise in determining a theoretical calculation of what
17 portion of distribution mains could be considered “demand” primarily based on the system
18 load factor.¹⁰

⁸ Alfred E. Kahn, *The Economics of Regulation: Principles and Institutions* 95 (1988) Vol. I.

⁹ Barthol Direct, page 12, lines 15 – 18.

¹⁰ Barthol Direct, page 13, line 11 – page 14, line 12.

1 **Q. Is the Company’s approach for calculating the Company’s Average and Excess**
2 **Capacity costs calculations reasonable?**

3 A. It is clear to me that the Company put considerable thought and effort into trying to
4 develop a reasonable methodology. However, the adjustments do not resolve the fundamental
5 challenge of the Minimum System Study to accurately reflect cost causation. The Minimum
6 System Study requires parties to debate what a hypothetical low- or no-capacity system
7 would look like, something that is not feasible. Recognizing the inherent oddness of this
8 methodology, the Company then layers on additional hypothetical calculations, informed by
9 subjective decisions, to determine what portion of demand is “average” and “excess”
10 capacity. In reality, it is a customer’s demand that causes the fixed costs of the distribution
11 system, not simply the numerical addition of that customer to the system. When the
12 Company invests in a distribution main, it does so to ensure that the system is reliable and
13 safe at customers’ maximum demand.

14 **Q. In the Company’s previous rate case, the Commission noted that the Minimum**
15 **System Study has been accepted in North Dakota for almost two decades.¹¹ Why**
16 **should the Commission shift its policy now?**

17 A. For two reasons. First, as I have articulated in this testimony, the Basic Customer
18 approach is a more reasonable, objective, and supported method for classifying distribution
19 main costs. Second, and perhaps more importantly, the Company uses the Minimum System
20 Study to calculate unit customer costs, which is then used to inform and justify higher

¹¹ Case No. PU-21-381, Northern States Power Company 2021 Natural Gas Rate Increase Application Findings of Fact, Conclusions of Law and Order. October 27, 2022. Page 4.

1 customer charges. In this rate case, the Company is reintroducing a distribution charge – a
2 small but welcome move away from relying completely on its extraordinarily high customer
3 charge for residential rates.. I address both the distribution charge and the proposed increase
4 to the customer charge in the next section of my testimony.

5 **Q. Are you aware of any other public utility commissions that use the basic customer**
6 **approach?**

7 A. Yes. There are approximately 19 states that use the basic customer, or another approach,
8 rather than the minimum systems approach.¹²

9 **Q. What is your recommendation?**

10 A. I recommend the Commission direct the Company to use the Basic Customer method for
11 classifying distribution main costs. As a result, distribution mains will be classified as 100
12 percent demand.

13 **Q. What would be the cost allocation impact of your recommendation?**

14 A. I cannot say at this time. The Company's CCOSS workpapers¹³ are not fully functional
15 with all formulas intact. I recommend that the Company provide a fully functional CCOSS
16 Schedule 3 as well as identify the cost allocation impact of classifying distribution mains as
17 100% demand related in its rebuttal testimony.

¹² *In the Matter of the Application of CenterPoint Energy Corp. d/b/a CenterPoint Energy Minnesota Gas for Authority to Increase Natural Gas Rates in Minnesota*, Docket No. G-008/GR-15-424, Rebuttal Testimony of Russell A. Feingold, at Schedule 3 (Dec. 18, 2015).

¹³ CCOSS-1-Barthol Sch. 03.

1 **III. Customer Charge and Rate Design**

2 **Q. Is the Company proposing to increase the monthly Residential Delivery Service**
3 **Charge?**

4 A. Yes. Witness Hoschmiller testifies that the Company is proposing to increase the monthly
5 residential delivery charge by \$2.75, from \$22.25 to \$25.00. Witness Hoschmiller also
6 testifies that the Company is proposing to add a residential volumetric distribution charge
7 of \$0.06155 per therm.

8 Witness Hoschmiller testifies that the CCOSS indicates that the Company should
9 increase residential rates by 24.53 percent, however, the Company is only proposing a
10 12.5 percent increase, which is still more than the overall 9.4 percent revenue increase the
11 Company is seeking.

12 **Q. Do you agree with the Company's proposal to increase its customer charge?**

13 A. No. To start, and as stated in the previous section of this testimony, I recommend that the
14 Commission order the Company to modify its CCOSS to classify distribution main costs as
15 100% demand related. Second, I recommend that the Commission reject the Company's
16 proposal to increase the residential customer charge. The Commission should instead allocate
17 any approved rate increases into the Company's newly established delivery system charge.

18 **Q. Is NSP's customer charge in line with the customer charges for gas utilities in**
19 **neighboring states?**

20 A. No. Based on my research of 20 neighboring gas utilities, NSP's monthly customer
21 charge is more than twice as high as all but one gas utility outside North Dakota, and more
22 than twice as high as NSP's sister Xcel companies in Minnesota and Colorado. As AARP

1 noted in its testimony two years ago in the Xcel gas rate case in North Dakota, there is no
 2 reason that its North Dakota gas customers should pay a monthly customer charge twice or
 3 three times higher than it charges its customers in Colorado and Minnesota.

4 *Table 1: Regional Comparison of Gas Utility Customer Charges*

Utility	Monthly Cost	Source	Utility	Monthly Cost	Source
North Dakota			Minnesota		
Xcel	\$22.25	link	Xcel	\$9.00	link
MDU	\$25.56	link	CenterPoint	\$9.50	link
Great Plains	\$7.75	link	Great Plains	\$7.50	link
Dakota Natural Gas	\$16.00	link	Minnesota Energy Resources	\$9.50	link
South Dakota			Montana		
MDU	\$9.30	link	MDU	\$9.30	link
Mid American	\$6.25	link	Northwestern Energy	\$6.50	link
Northwestern Energy	\$8.00	link	Energy West: West Yellowstone	\$6.50	link
Colorado			Energy West: Great Falls	\$6.73	link
Xcel – Public Service Co. Colorado	\$11.00	link	Energy West: Cascade	\$6.73	link
Black Hills Energy	\$12.00	link	Energy West: Cut Bank	\$13.23	link
Wyoming					
MDU	\$19.22	link			

5

6 **Q. Do customers prefer high customer charges?**

7 A. In my experience, consumer advocates, such as the National Association of State Utility
 8 Advocates, generally oppose increases to fixed charges because high fixed charges
 9 disproportionately and inequitably increase the rates of low usage customers, a group that

1 often includes low-income, elderly and minority customers.¹⁴ Furthermore, a higher customer
2 charge discourages the efficient use of the system relative to a lower customer charge, all else
3 equal.

4 **Q. How do higher fixed monthly charges disproportionately impact low-usage**
5 **customers?**

6 A. When compared to a rate design with a higher volumetric rate, high customer charges, by
7 definition, shift costs from high usage customers to low usage customers. This is because the
8 fixed portion of the bill comprises a relatively larger portion for lower usage customers.
9 Usage is often correlated with income meaning, all else equal, lower income residents are
10 more likely to be lower usage customers as well. When this is true, high fixed charges shift
11 costs onto lower incomes residential customers.

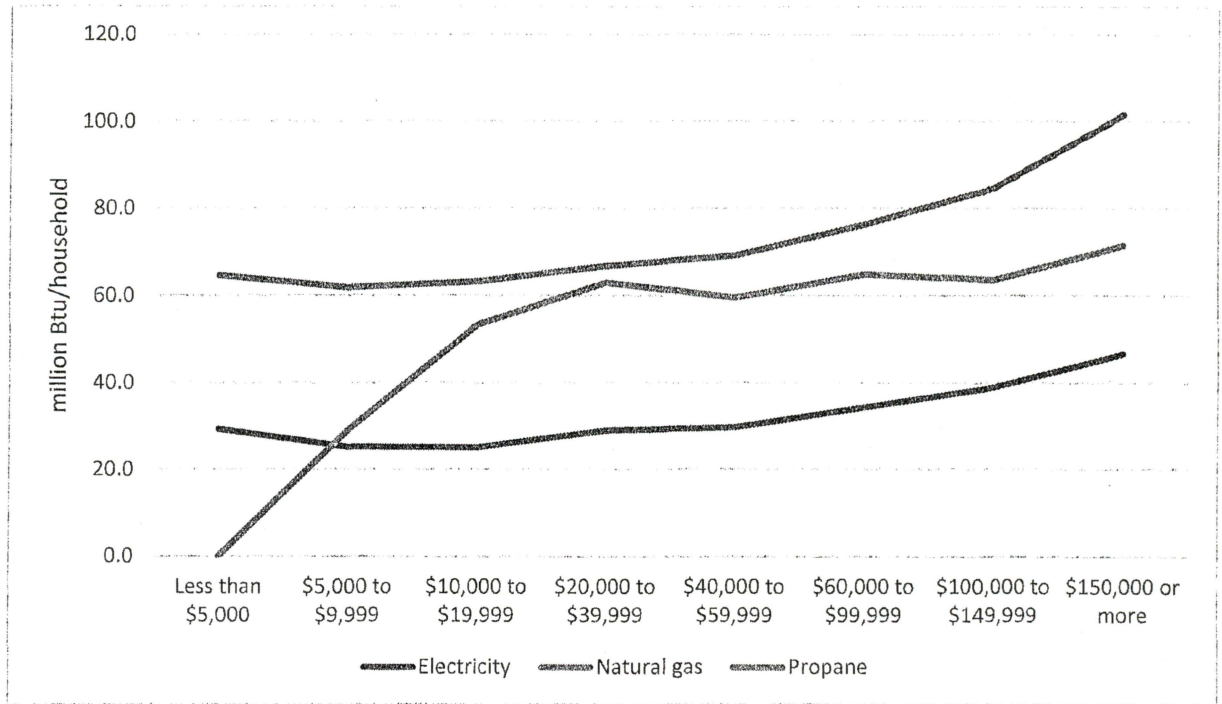
12 **Q. Do you have any data that supports your claim that low-income customers are more**
13 **likely to be lower usage customers?**

14 A. Yes. The US Energy Information Administration (EIA) publishes energy use data
15 through its Residential Energy Consumption Survey (RECS), including annual household
16 consumption by household income. According to the RECS data released in March 2024,
17 there is a clear and consistent correlation between income and energy usage across each
18 census region of the country, including the Midwest, as indicated by the table below.

¹⁴ NASUCA Customer Charge Resolution 2015-1. Available at: <https://www.nasuca.org/customer-chargerresolution-2015-1/>.

1

Table 2: Annual household site fuel consumption in the Midwest—totals and averages, 2020¹⁵



2

3 **Q. Earlier you stated that a higher customer charge discourages the efficient use of the**
 4 **system relative to a lower customer charge, all else equal. Will you please explain?**

5 **A.** Yes. A higher customer charge reduces a customer’s ability to control their bill relative to
 6 a lower customer charge. That is because more of a customer’s monthly bill is “fixed.” When
 7 relatively more of the customer’s bill is in volumetric rates, the customer receives a price
 8 signal that corresponds to their usage. In this way, a lower customer charge incentivizes a
 9 more efficient and less costly system to the benefit of all customers.

¹⁵ U.S. Energy Information Administration, “Summary annual household site consumption and expenditures in the Midwest – totals and intensities, 2020” (2024). Available at: <https://www.eia.gov/consumption/residential/data/2020/c&e/xls/ce2.3.xlsx>.

1 **Q. Don't many customers like having predictable, steady monthly rates?**

2 A. Based on my experience, some customers do prefer predictable, stable monthly rates.

3 NSP, like many other gas utilities across the country, offers a program that will smooth a

4 customer's bill out over the year, for those customers that desire greater monthly bill

5 stability. A gas utility will take an individual customer's 12 most recent bills and then

6 calculate an average. At the end of the customer's first year in the program, the Company

7 will true up the balance and apply the surcharge or refund to the customer for their next 12-

8 month payment plan. I understand that NSP offers this program in North Dakota.¹⁶

9 Many customers also desire greater *control* over their monthly energy bills, and thus

10 prefer a greater reward for their energy conservation and energy efficiency efforts. To

11 grant greater control for residential gas consumers, NSP's high customer charge should

12 be reduced, and the energy usage rate increased correspondingly.

13 **Q. What is a volumetric distribution charge?**

14 A. A volumetric distribution charge recovers a portion of the cost of the gas delivery system

15 on a per usage basis. That is, the more a customer consumes the more that they contribute to

16 cost recovery. In addition to better assigning costs to cause than a fixed customer charge,

17 volumetric charges also send an efficient price signal to customers.

¹⁶ <https://nd.my.xcelenergy.com/s/billing-payment/manage-bill/averaged-monthly-payment>

1 **Q. Why is it appropriate to shift more costs from the fixed customer charge to the**
2 **volumetric distribution charge in this case?**

3 A. For two reasons. First, it better reflects actual cost causation. The Company builds the
4 gas delivery system to meet customer demand and therefore customers with higher demand
5 should pay more of the system costs. Second, volumetric system charges send a clear price
6 signal to customers to be more efficient. A more efficient system is beneficial to all. As Chair
7 Fedorchak stated in in the last rate case order, NSP's system is both aging and growing, and
8 Company investments will cause rates to increase.¹⁷ The Company and customer can
9 minimize the potential rate increases by better managing demand on its system through
10 demand-side resources like energy efficiency and demand response, but also through the use
11 of price signals.

12 **Q. Do other gas utilities in the state have a residential distribution charge?**

13 A. Yes. In addition to having only a \$7.75/month customer charge, Great Plains Natural Gas
14 Company has a residential distribution delivery charge of \$0.9220/dekatherm,¹⁸ or nearly
15 40% greater than NSP's proposal of 0.6155/dekatherm.

¹⁷ Case No. PU-21-381 Dissent of Commissioner Julie Fedorchak, Chair.

¹⁸ <https://www.gpng.com/wp-content/uploads/PDFs/Rates-Tariffs/NorthDakota/GPNDRateSummarySheet.pdf>

1 **Q. Will the Company still have the opportunity to recover its revenue requirement if**
2 **the proposed customer charge increase is rejected or if the customer charge is**
3 **decreased?**

4 A. Yes. Rates are designed to recover the Company's revenue requirement in a rate case. If
5 the Commission rejects the Company's proposed monthly customer charge increase, or
6 decreases the customer charge, then an offsetting amount will be collected through the
7 distribution charge. The result will be revenue neutral for the Company.

8 **Q. The Company request that, if the revenue requirement authorized in this case is**
9 **lower than the Company requested, then the Company proposes to lower the**
10 **distribution charger, rather than the customer charge.¹⁹ Do you agree with the**
11 **Company's proposal?**

12 A. No. As I have demonstrated in this case, residential customers already experience one of
13 the highest gas utility customer charges in the region. The Commission should continue the
14 process of shifting some customer charge costs into the distribution charge to create more
15 efficient and fairer residential rate design.

16 **Q. What is your customer and distribution charge recommendation?**

17 A. I recommend that the Commission reject the Company's proposal to increase the existing
18 customer charge from \$22.25 per month to \$25.00 per month, and instead reduce the
19 customer charge to \$15.00. The Company would adjust the distribution charge to recover the
20 remaining authorized revenue requirement. If the Commission were to grant the Company's

¹⁹ Hsochmiller Direct, 12, lines 10 – 12.

1 full requested revenue requirement, the distribution charge would increase from NSP's
2 proposed \$0.6155 to \$0.21543.

3 **Q. Does this conclude your testimony?**

4 **A.** It does, thank you.