



# Public Service Commission

## State of North Dakota

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July 1, 2024

Public Service Commission  
Attention: Steve Kahl  
600 East Boulevard Avenue, Dept 408  
Bismarck, ND 58505-0480

In re: Northern States Power Company  
2024 Natural Gas Rate Increase  
Application  
Case No. PU-23-367

Dear Mr. Kahl,

Enclosed for filing in the above referenced matter please find the original copy of the following public document:

1. Prefiled Direct Testimony of Karl R. Pavlovic.

Respectfully,

A handwritten signature in black ink, appearing to read "Brian Johnson".

Brian Johnson  
Special Assistant Attorney General Bar ID 07397  
North Dakota Public Service Commission  
600 East Boulevard Avenue Dept. 408  
Bismarck, ND 58505  
701-328-2407

STATE OF NORTH DAKOTA  
BEFORE THE NORTH DAKOTA PUBLIC SERVICE COMMISSION

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IN THE MATTER OF THE APPLICATION OF  
NORTHERN STATES POWER COMPANY FOR  
AUTHORITY TO INCREASE RATES FOR  
NATURAL GAS SERVICE IN NORTH DAKOTA

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Case No. PU-23-367

**DIRECT TESTIMONY OF  
KARL R. PAVLOVIC**

**Submitted on Behalf of  
the Advocacy Staff of the  
North Dakota Public Service Commission**

July 1, 2022

**DIRECT TESTIMONY OF  
KARL R. PAVLOVIC**

**QUALIFICATIONS**

**Q. PLEASE STATE YOUR NAME, POSITION AND BUSINESS ADDRESS.**

A. My name is Karl Richard Pavlovic. My business address is 22 Brookes Avenue, Gaithersburg, MD 20877. I am a Senior Consultant with and the Managing Director of PCMG and Associates LLC.

**Q. PLEASE DESCRIBE PCMG.**

A. PCMG and Associates LLC (PCMG) is an association of experts in economics, accounting, finance, and utility regulation and policy, with over 75 years collective experience providing assistance to counsel and expert testimony regarding the regulation of electric, gas, water, and wastewater utilities. PCMG began operation on January 1, 2015. During its most recent year of operation, PCMG has provided assistance to counsel and/or testimony in regulatory proceedings before Federal Energy Regulatory Commission, the Pennsylvania Public Service Commission, the Maine Public Utilities Commission, the Massachusetts Department of Public Utilities, the New Jersey Board of Public Utilities, and the Hawaii Public Utilities Commission. PCMG is currently providing assistance to the Hawaii Division of Consumer Advocate, the Maine Office of the Public Advocate, the Massachusetts Office of the Attorney General, the New Jersey Division of Rate Counsel, and the Pennsylvania Office of Consumer Advocate.

1 **Q. HAVE YOU PREPARED A SUMMARY OF YOUR QUALIFICATIONS AND**  
2 **EXPERIENCE?**

3 A. Yes. Exhibit KRP-1 to my testimony summarizes my qualifications and experience.

4 **Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY IN REGULATORY**  
5 **PROCEEDINGS?**

6 A. Yes. Exhibit KRP-1 also contains a complete list of my engagements as an expert and/or  
7 expert witness in matters before state and federal regulatory agencies. I have submitted  
8 testimony to the Federal Communications Commission, the Federal Energy Regulatory  
9 Commission, the Alaska Public Utilities Commission, the Alberta Utilities Commission,  
10 the California Public Utilities Commission, the Delaware Public Service Commission, the  
11 Public Service Commission of the District of Columbia, the Hawaii Public Utilities  
12 Commission, the Illinois Commerce Commission, the Kansas Corporation Commission,  
13 the Maine Public Utilities Commission, the Maryland Public Service Commission, the  
14 Massachusetts Department of Public Utilities, the Missouri Public Service Commission,  
15 and the North Dakota Public Service Commission.

16 **Q. IN WHICH PROCEEDINGS HAVE YOU PREVIOUSLY APPEARED BEFORE**  
17 **THIS COMMISSION?**

18 A. I appeared on behalf of the North Dakota Public Service Commission Advocacy Staff in  
19 Case No. PU-12-813 Application of Northern States Power Company for Authority to  
20 Increase Rates for Electric Service in North Dakota, in Case No. PU-17-295 Montana-  
21 Dakota Utilities Co. for Authority to Establish Increased Rates for Natural Gas Service,  
22 in Case PU-20-441 Application of Northern States Power Company for Authority to

1 Increase Rates for Electric Service in North Dakota, and in Case No. PU-21-381  
2 Application of Northern States Power Company for Authority to Increase Rates for  
3 Natural Gas Service in North Dakota.

4 **Q. PLEASE SUMMARIZE YOUR QUALIFICATIONS?**

5 A. I received undergraduate and graduate degrees in Philosophy from Yale College and  
6 Purdue University. By education and professional experience I have expertise in formal  
7 and mathematical logic, statistics, economics, financial analysis, econometrics, and  
8 computer modeling. I have knowledge and experience in the areas of commercial and  
9 industrial operations in the energy, transportation, and telecommunications industries and  
10 am familiar with a wide range of experimental and investigative methods in science and  
11 engineering.

12 **Q. PLEASE SUMMARIZE YOUR ELECTRIC AND GAS REGULATORY**  
13 **EXPERIENCE.**

14 For most of my career I have performed analyses and submitted testimony regarding  
15 electric and gas utility least-cost planning, reliability, cost of service, rate design, and  
16 weather-emergency response. Specifically regarding gas utilities, I have testified on: (a)  
17 integrated resource planning, (b) class cost of service and rate design, and (c) various  
18 infrastructure operating expense and investment recovery mechanisms.

19 **I. PURPOSE AND ORGANIZATION**

20 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

21 A. I have been asked by the Commission's Advocacy Staff to address Northern States Power  
22 (NSP) assertions and proposals in this proceeding regarding (1) North Dakota class cost of

1 service study, (2) North Dakota class revenue responsibility distribution, and (3) North  
2 Dakota rate design.

3 **Q. HAVE YOU PREPARED ANY EXHIBITS IN SUPPORT OF YOUR**  
4 **RECOMMENDATIONS?**

5 A. Yes. I have included the following four exhibits:

6 Exhibit No. KRP-1: Qualifications

7 Exhibit No. KRP-2: CCOSS Without Minimum System Classification

8 Exhibit No. KRP-3: Calculations for Tables 2, 3, 4 and 5.

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11 **II. SUMMARY OF TESTIMONY AND CONCLUSIONS**

12 **Q. PLEASE SUMMARIZE YOUR TESTIMONY.**

13 A. My testimony finds the following.

- 14 • The NSP CCOSS' use of a minimum size study to classify a portion of  
15 distribution mains as customer-related is inconsistent with the principle of cost  
16 causation.
- 17 • The NSP CCOSS' use of customer and demand allocators to allocate mains is  
18 inconsistent with the principle of cost causation.
- 19 • NSP's CCOSS without minimum-size classification and allocation of distribution  
20 mains is a guide to rate design that is consistent with the principle of cost causation.

21 I recommend that the Commission:

- 1           • Direct that NSP’s distribution mains be classified as wholly demand-related with  
2           no customer-related component, consistent with the CCOSS’ classification of  
3           transmission plant and regulator stations as only demand-related.
- 4           • Direct that NSP’s distribution mains costs be allocated using NSP’s Average and  
5           Peak, consistent with the CCOSS’ allocation of transmission plant and regulator  
6           stations.
- 7           • Direct that NSP derive class tariff rates from class revenue requirements based on  
8           NSP’s CCOSS without minimum-size classification and allocation of NSP’s  
9           distribution mains.

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11 **III. DISCUSSION**

12                   **A. NORTH DAKOTA COST OF SERVICE AND RATE DESIGN**

13 **Q. PLEASE SUMMARIZE NSP'S NORTH DAKOTA COST OF SERVICE AND**  
14 **RATE DESIGN PROPOSALS.**

15 A. Based on a forecasted 2024 Test Year class cost of service study<sup>1</sup> and a revenue requirement  
16 distribution to classes based on the ratemaking principles of cost causation, competitive  
17 service pricing and moderation of rate increases,<sup>2</sup> and the cost study's class customer cost  
18 results, NSP proposes the following changes in customer rates in Table 1.

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<sup>1</sup> Direct Testimony of Christopher J. Barthol (Berthol Direct).

<sup>2</sup> Direct Testimony of Martha E Hoschmiller (Hoschmiller Direct)..

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**Table 1: NSP Rate Design Proposals<sup>3</sup>**

<b>Residential (RC 401):</b> 12.5% revenue increase with Delivery Service Charge increased 5.1% from \$22.25/month to \$25.00/month and a new Distribution Charge of \$0.06155/therm;
<b>Commercial and Industrial (RC 403, 410):</b> 7.2% revenue increase with (a) Basic Service Charge unchanged of \$35.00/month and (b) Distribution Charge increased 37.54% from \$0.13581/therm to \$0.18665/therm;
<b>Small Interruptible (RC 404):</b> 7.7% revenue increase with (a) Basic Service Charge increased 25.0% from \$100.00/month to \$125.00/month and (b) Distribution Charge increased 31.5% from \$0.11065/therm to \$0.14549/therm;
<b>Large Interruptible (RC 405):</b> 8.1% revenue increase with (a) Basic Service Charge unchanged of \$275.00/month and (b) Distribution Charge increased 48.4% from \$0.07636/therm to \$0.11330/therm.

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**B. NORTH DAKOTA CLASS COST OF SERVICE STUDY**

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**Q. HAVE YOU EXAMINED NSP’S NORTH DAKOTA CLASS COST OF SERVICE STUDY (CCOSS)?**

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A. Yes. NSP’s CCOSS is a spreadsheet model<sup>4</sup> that follows the standard class cost of service procedure of first functionalizing costs, second classifying the functionalized costs as directly assignable to certain classes or as demand-related, customer-related or commodity-related, and third allocating to customer classes those functionalized costs that are classified as demand-, customer-, or commodity-related.<sup>5</sup>

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**Q. HAVE YOU FOUND ANY ERRORS IN THE CCOSS’ FUNCTIONALIZATION OF NSP’S GAS COSTS?**

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A. No. The CCOSS properly functionalizes NSP’s gas costs using the FERC Gas Uniform System of Accounts (USoA).

14

<sup>3</sup> Hoschmiller Direct, page 1 line23 to page 2 line 7 and Exhibit MEH-1, Schedules 3and 4.

<sup>4</sup> Exhibit CJB-1, Schedule 3.

<sup>5</sup> See NARUC Gas Distribution Rate Design Manual (NARUC Gas Manual), 1989, pages 22-24.

1 **Q. HAVE YOU FOUND ANY ERRORS IN THE CCOSS' CLASSIFICATION OF**  
2 **NSP'S FUNCTIONALIZED GAS COSTS?**

3 A. Yes. The CCOSS relies on a NARUC minimum system study<sup>6</sup> to first classify NSP's  
4 distribution mains costs as 65.3% customer-related and the remaining 34.7% classified  
5 demand related to which NSP makes a "demand adjustment" that lowers the customer -  
6 related percentage to 49.2% and raises the demand related percentage to 50.8%.<sup>7</sup> NSP's  
7 minimum system study is based on the minimum size main theory which "assumes that  
8 there is a ... minimum size main necessary to connect the customer to the system"  
9 (emphasis added).<sup>8</sup> Under the minimum size theory, "all distribution mains are priced  
10 out at the historic unit cost of the smallest main installed, and assigned as customer  
11 costs."<sup>9</sup> The NARUC manual noted in 1989, the date of publication, that the minimum  
12 size main theory was controversial.<sup>10</sup> While this method of distribution mains  
13 classification is still frequently used, there is, from the perspective of cost causation, no  
14 theoretical or practical justification for minimum size mains classification.

15 **Q. WHAT IS THE COST CAUSATION THAT DEFINES THE CLASSIFICATION**  
16 **OF GAS DISTRIBUTION ACCOUNTS AS CUSTOMER-RELATED?**

17 A. As clearly articulated in Bonbright's Principles of Public Utility Rates,<sup>11</sup> under the  
18 principle of cost causation, customer-related costs are "those operating and capital costs  
19 found to vary with number of customers."<sup>12</sup> Operationally defined, customer-related

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<sup>6</sup> Barthol Direct, page 9 lines 12-24; NARUC Gas Distribution Rate Design manual (NARUC Manual).

<sup>7</sup> Barthol Direct, page 11 line 12 to page 14, line 12 and Exhibit CJB-1, Schedule 2, pages 3-4..

<sup>8</sup> NARUC Gas Manual, page 22.

<sup>9</sup> NARUC Gas Manual, page 22; Direct Testimony of Christopher J. Barthol, page 14, lines 11-13.

<sup>10</sup> NARUC Gas Manual, page 22.

<sup>11</sup> Bonbright et al, Principles of Public Utility Rates, 1988.

<sup>12</sup> Bonbright, page 490; also see NARUC Manual Electric Utility Cost Allocation Manual, 1992, page 90, "The customer component of distribution facilities is the portion of costs which varies with the number of customers."

1 costs are the “costs of connecting another customer or the savings in costs of not  
2 connecting the customer.”<sup>13</sup> Per the NARUC Gas Manual, customer costs are those  
3 operating capital costs found to vary directly with the number of customers served rather  
4 than with the amount of utility service supplied ... [t]hey include the expenses of  
5 metering, reading, billing, collecting, and accounting, as well as those cost associated  
6 with the capital investment in metering and in customers’ service connections.”<sup>14</sup> NSP’s  
7 CCOSS properly classifies the costs of services, meters and house regulators as  
8 customer-related. The CCOSS errs only in classifying a portion of the distribution mains  
9 costs as customer-related, rather than properly as demand-related.

10 **Q. WHAT IS THE COST CAUSATION THAT DEFINES THE CLASSIFICATION**  
11 **OF GAS DISTRIBUTION ACCOUNTS AS DEMAND-RELATED?**

12 A. As Bonbright also explains, it is theoretically impossible for the capital costs of  
13 distribution system facilities upstream of the facilities to be classified as customer-related  
14 because the connection of a new customer (or disconnection of an existing customer) has  
15 no measurable impact on the costs of those facilities.<sup>15</sup> Since the costs of the distribution  
16 facilities upstream of customer-related facilities do not and cannot vary with the number  
17 of customers connected to the distribution system, for the purposes of embedded cost  
18 analysis, those costs are properly classified as demand-related, because those costs do  
19 “var[y] continuously (and, perhaps, even more or less directly) with the maximum  
20 demand imposed on this system as measured by peak load.”<sup>16</sup> Per the NARUC Gas

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<sup>13</sup> Bonbright, page 490.

<sup>14</sup> NARUC Gas Manual, page 22; see also page 23 “only facilities, such as meters, regulators and service taps, are considered to be customer related, as they vary directly with the number of customers on the system.”

<sup>15</sup> Bonbright, page 491.

<sup>16</sup> Bonbright, page 492; see also NARUC Electric Manual, page 90, “Classifying distribution plant as a demand cost assigns investment ... based upon its contribution to some total peak load ,, [because] costs are incurred to serve area load, rather than a specific number of customers.”

1 Manual, demand related costs “are related to maximum system requirements which the  
2 system is designed to serve during short intervals and do not directly vary with the  
3 number of customers or their annual usage.”<sup>17</sup> NSP’s CCOSS properly classifies the  
4 costs of production plant, storage plant, transmission plant and regulator stations as  
5 demand-related. The CCOSS errs only in classifying a portion of the distribution mains  
6 costs as customer-related, rather than properly as demand-related.

7 **Q. WHAT IS YOUR RECOMMENDATION REGARDING THE CLASSIFICATION**  
8 **OF DISTRIBUTION MAINS IN NSP’S CCOSS?**

9 A. For reasons given above I recommend that NSP’s distribution mains be classified as  
10 wholly demand-related with no customer-related component, consistent with the CCOSS’  
11 classification of transmission mains and regulator stations as demand-related.

12 **Q. HAVE YOU FOUND ANY ERRORS IN THE CCOSS’ ALLOCATION OF NSP’S**  
13 **CLASSIFIED AND FUNCTIONALIZED GAS COSTS?**

14 A. No, except for the allocation error that results from the erroneous classification of a portion  
15 of distribution mains as customer-related and the allocation of that portion using a customer  
16 allocator.

17 **Q. WHAT IS YOUR RECOMMENDATION REGARDING THE ALLOCATION OF**  
18 **NSP’S MAINS COSTS?**

19 A. For the reasons given above I recommend that NSP’s distribution mains costs be  
20 classified as only demand-related and allocated using the Average and Peak demand  
21 allocator consistent with to the demand allocator applied to transmission and regulator  
22 station costs.

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<sup>17</sup> NARUC Gas Manual, pages 23 and 24.

1 **Q. WHAT IS THE IMPACT OF YOUR RECOMMENDATIONS REGARDING THE**  
2 **CLASSIFICATION AND ALLOCATION OF NSP'S GAS COSTS?**

3 A. Regarding distribution mains classification, NSP's residential rate class has  
4 proportionately more customers than its commercial rate classes and significantly less  
5 aggregate demand than the commercial classes. Consequently, the CCOSS' class  
6 customer allocation of distribution mains costs that the CCOSS erroneously classifies as  
7 customer-related results in an unsupported and unjustified over allocation of distribution  
8 costs to NSP's residential rate class, which constitutes a interclass subsidization of the  
9 commercial & industrial class. Classifying the entirety of NSP's distribution mains costs  
10 as demand-related corrects the over allocation.

11 **Q. HAVE YOU QUANTIFIED THE IMPACT OF YOUR RECOMMENDATION?**

12 A. Yes. NSP's CCOSS calculates the customer class total operating income and rate of return  
13 under current rates as shown in columns B and C of Table 2 below. My correction of the  
14 minimum-size classification and allocation error in NSP's CCOSS described above results  
15 in the customer class costs of service shown in columns D and E of Table 2.

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**Table 2: Comparison of Class Costs of Service Under Current Rates (\$000)**

Rate Class (A)	NSP CCOSS <sup>18</sup>		CCOSS without Minimum- Size Classification <sup>19</sup>		Increase (Decrease) (F)
	Operating Income (B)	Rate of Return (C)	Operating Income (D)	Rate of Return (E)	
Residential	\$1,075	1.07%	\$2,215	2.86%	(\$3,451)
C&I Firm	\$4,213	6.63%	\$3,180	3.75%	\$4,051
Small Interruptible	\$318	30.28%	\$294	18.96%	(\$599)
Large Interruptible	\$628	24.32%	\$546	12.79%	(\$82)
Total	\$6,234	3.71%	\$6,234	3.71%	\$0

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**NORTH DAKOTA CLASS REVENUE REQUIREMENTS**

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**Q. WHAT IS NSP’S PROPOSAL REGARDING CLASS REVENUE**

10

**REQUIREMENTS?**

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A. NSP proposes to apportion or distribute the overall revenue requirement to customer classes

12

based on cost of service adjusted with regarding efficient energy use, competitive services

13

and moderation in rate increase.<sup>20</sup>

<sup>18</sup> Exhibit CJB-1, Schedule3, page 1 lines 40 and 42.

<sup>19</sup> Exhibit KRP-2.

<sup>20</sup> Hoschmiller Direct, page 2, lines 11-24.

1 **Q. DO YOU FIND ANY ERRORS IN NSP’S PROPOSED CLASS REVENUE**  
 2 **REQUIREMENT APPORTIONMENT?**

3 A. Yes, in that it is based on the results of NSP’s CCOSS with minimum-size classification of  
 4 distribution mains. Table 3 below compares NSP’s proposed class revenue requirements  
 5 and class revenue increases to the class revenue requirements and increases based on the  
 6 results from the CCOSS without minimum-size classification of distribution mains.

7 **Table 3: Comparison of Class Revenue Requirements (\$000)**

		NSP <sup>21</sup>			PSC <sup>22</sup>		
Rate Class (A)	Current Revenue (B)	Proposed Revenue (C)	Increase (Decrease) (D)	Percent Increase (E)	Proposed Revenue (F)	Increase (Decrease) (G)	Increase (Decrease) (H)
Residential	\$35,610	\$40,061	\$4,451	12.50%	\$38,611	\$3,001	8.43%
C&I Firm	\$45,208	\$48,471	\$3,263	7.22%	\$49,516	\$4,308	9.53%
Small Interruptible	\$2,472	\$2,662	\$190	7.69%	\$2,870	\$398	16.11%
Large Interruptible	\$6,700	\$7,242	\$542	8.09%	\$7,440	\$740	11.04%
Total	\$89,990	\$98,436	\$8,446	9.39%	\$98,437	\$8,447	9.39%

8  
 9 **Q. HAVE YOU DEVELOPED A CLASS REVENUE RESPONSIBILITY BASED ON**  
 10 **THE CCOSS WITHOUT MINIMUM-SIZE CLASSIFICATION OF**  
 11 **DISTRIBUTION MAINS AND ADVOCACY STAFF WITNESS MUGRACE’S**  
 12 **PROPOSED OVERALL REVENUE REQUIREMENT?**

13 A. Yes. I have developed class revenue requirements based on the CCOSS without minimum-  
 14 size classification of distribution mains and Staff Witness Mugrace’s recommended revenue

<sup>21</sup> Hoschmiller Direct, page 9, Table 2.

<sup>22</sup> Exhibit KRP-3.

1 requirement.<sup>23</sup> Table 4 compares those class revenue requirements to NSP’s proposed class  
2 revenue requirements.

3 **Table 4: Comparison of Class Revenue Requirements (\$000)**

Rate Class (A)	NSP Proposed Revenue <sup>24</sup> (B)	PSC Proposed Revenue <sup>25</sup> (C)	Increase (Decrease)
Residential	\$40,061	\$37,970	(\$2,091)
C&I Firm	\$48,471	\$48,694	\$223
Small Interruptible	\$2,662	\$2,823	\$161
Large Interruptible	\$7,242	\$7,316	\$74
Total	\$98,436	\$96,803	(\$1,633)

4  
5 As one can see from Table 3, the net impact of the corrected class cost of service and Staff  
6 Witness Mugrace’s recommended revenue requirement is a reduction in the revenue  
7 requirement of the Residential rate class and marginal increases for the other classes.

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10 **C. NORTH DAKOTA TARIFF RATE DESIGN**

11 **Q. WHAT ARE NSP’S RATE DESIGN PROPOSALS?**

12 A. NSP is proposing no structural changes to its Commercial & Industrial, Small Interruptible  
13 and Large Interruptible customer classes’ rate structures. NSP proposes to add a  
14 Distribution Charge to its Residential rate structure. Regarding both class rate structures and  
15 class tariff charges proposals see Table 1 above.

<sup>23</sup> Direct Testimony of Dante Mugrace, Schedule DM-1.

<sup>24</sup> Hoschmiller Direct, page 9, Table 2.

<sup>25</sup> Exhibit KRP-3.

1 **Q. DO YOU HAVE ANY CRITICISMS OF THE PROPOSED RATE DESIGNS?**

2 A. My only criticism is that the class tariff charges are derived from NSP's proposed class  
3 revenue requirements. Table 5 shows my recommended class tariff charges based on the  
4 class revenue requirements in Table 4 above.

5 **Table 5: Recommended Class Tariff Rates<sup>26</sup>**

Residential (RC 401): 8.4% revenue increase with Delivery Service Charge unchanged at \$22.25/month and a new Distribution Charge of \$0.05507/therm;
Commercial and Industrial (RC 403, 410): 9.5% revenue increase with (a) Basic Service Charge unchanged of \$35.00/month and (b) Distribution Charge increased 37.54% from \$0.13581/therm to \$0.18944/therm;
Small Interruptible (RC 404): 16.1% revenue increase with (a) Basic Service Charge increased 25.0% from \$100.00/month to \$125.00/month and (b) Distribution Charge increased 60.7% from \$0.11065/therm to \$0.17779/therm;
Large Interruptible (RC 405): 11.0% revenue increase with (a) Basic Service Charge unchanged of \$275.00/month and (b) Distribution Charge increased 54.6% from \$0.07636/therm to \$0.11804/therm.

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7 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

8 A. Yes.

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<sup>26</sup> Exhibit KRP-3.

**Table 2: Comparison of Class Costs of Service Under Current Rates (\$000)**

Rate Class	NSP CCOSS		NSP CCOSS w/o Minimum Size		Increase (Decrease)
	Operating Income	Rate of Return	Operating Income	Rate of Return	
(A)	(B)	(C)	(D)	(E)	(F)
Residential	\$1,075	1.07%	\$2,215	2.86%	(\$3,451)
C&I Firm	\$4,213	6.63%	\$3,180	3.75%	\$4,051
Small Interruptible	\$318	30.28%	\$294	18.96%	(\$599)
Large Interruptible	\$628	24.32%	\$546	12.79%	(\$82)
Total	\$6,234	3.71%	\$6,234	3.71%	\$0

**Table 5: Tariff Rate Adjustments**

Rate Class	Billing Determinant	NSP Current Revenue	NSP Proposed Class Revenue	PSC Change to Class Revenue	Adjusted Class Revenue	PSC Proposed Rate
(A)	(B)	(C)	(D)	(E)	(F)	(G)
Residential Delivery Service	659,380	\$14,671,197	\$16,484,491	(\$1,813,294)	\$14,671,197	\$22.25
Residential Distribution	42,851,288		\$2,637,497	(\$277,818)	\$2,359,678	\$0.05507
C&I Firm DSC	79,903,103		\$14,913,914	\$223,234	\$15,137,149	\$0.18944
Small Interruptible DSC	4,974,676		\$723,766	\$160,664	\$884,429	\$0.17779
Large Interruptible DSC	15,649,711		\$1,773,125	\$74,214	\$1,847,339	\$0.11804

**Table 3: Comparison of Class Revenue Requirement Apportionment (\$000)**

Rate Class	NSP				PSC Corrected CCOSS		
	Current Revenue	Proposed Revenue	Increase (Decrease)	Percent Increase (Decrease)	Proposed Revenue	Increase (Decrease)	Percent Increase (Decrease)
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
Residential	\$35,610	\$40,061	\$4,451	12.50%	\$38,611	\$3,001	8.43%
C&I Firm	\$45,208	\$48,471	\$3,263	7.22%	\$49,516	\$4,308	9.53%
Small Interruptible	\$2,472	\$2,662	\$190	7.69%	\$2,870	\$398	16.11%
Large Interruptible	\$6,700	\$7,242	\$542	8.09%	\$7,440	\$740	11.04%
Total	\$89,990	\$98,436	\$8,446	9.39%	\$98,437	\$8,447	9.39%

**Table 4: Comparison of Class Revenue Requirement Apportionment (\$000)**

Rate Class	NSP Proposed Revenue	PSC Proposed Revenue	Increase (Decrease)
(A)	(B)	(C)	
Residential	\$40,061	\$37,970	(\$2,091)
C&I Firm	\$48,471	\$48,694	\$223
Small Interruptible	\$2,662	\$2,823	\$161
Large Interruptible	\$7,242	\$7,316	\$74
Total	\$98,436	\$96,803	(\$1,633)

