

Rebuttal Testimony
Michael A. Peppin

Before the North Dakota Public Service Commission
State of North Dakota

In the Matter of the Application of Northern States Power Company
for Authority to Increase Rates for Electric Service in North Dakota

Case No. PU-20-441
Exhibit____(MAP-2)

Cost of Service Study

June 1, 2021

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1 **I. INTRODUCTION**

2

3 Q. PLEASE STATE YOUR NAME AND QUALIFICATIONS.

4 A. My name is Michael A. Peppin, and I am a Principal Pricing Analyst.

5

6 Q. HAVE YOU PREVIOUSLY PROVIDED TESTIMONY IN THIS PROCEEDING?

7 A. Yes. I filed Direct Testimony on behalf of Northern States Power Company
8 regarding the Company's proposed Class Cost of Service Study (CCOSS).

9

10 Q. DID ANY OTHER PARTIES PROVIDE DIRECT TESTIMONY REGARDING THE
11 COMPANY'S PROPOSED CCOSS?

12 A. Yes. The following witnesses provided testimony related to the Company's
13 proposed CCOSS:

- 14 • Mr. Karl R. Pavlovic, who submitted testimony on behalf of the
15 Advocacy Staff of the North Dakota Public Service Commission; and,
16 • Mr. Steve W. Chriss, who submitted testimony of behalf of Walmart Inc.

17

18 Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

19 A. I respond to the Direct Testimony of the witnesses listed above regarding the
20 Company's proposed CCOSS.

21

22 **II. RESPONSE TO RECOMMENDED CCOSS CHANGES**

23

24 Q. MR. PEPPIN, WHAT CCOSS-RELATED ISSUES WERE RAISED BY OTHER PARTIES?

25 A. Witnesses for the other parties addressed the following issues:

- 26 • *Plant Stratification Methodology.* Mr. Chriss on behalf of Walmart Inc.
27 opines that the Company's Plant Stratification method that the Company

1 uses to classify and allocate generation plant investment costs does not
2 represent the fixed nature of these investments. He also states that the
3 stratification method does not take into account the dispatch order when
4 the system is operating.

5 • *Minimum System and Zero Intercept Methodology.* Mr. Pavlovic on behalf of
6 Advocacy Staff of the North Dakota Public Service Commission objects
7 to the Company classifying FERC accounts 364 through 368 as both
8 demand and customer-related. He asserts that these facilities should be
9 classified as demand-related and allocated to class based on class demand
10 levels.

11

12 Q. HOW IS YOUR REBUTTAL TESTIMONY ORGANIZED?

13 A. I present my testimony in the sections as outlined below:

- 14 • Plant Stratification Analysis; and,
15 • Minimum System/Zero Intercept Analysis

16

17 **A. Plant Stratification Analysis**

18 Q. HOW LONG HAS THE COMPANY USED THE PLANT STRATIFICATION OR
19 EQUIVALENT METHODOLOGY FOR CLASSIFYING PRODUCTION PLANT
20 EQUIPMENT COSTS?

21 A. Although the process has been refined over the years, the Company has used
22 the Stratification methodology with support of the Commissions in North
23 Dakota, South Dakota and Minnesota since the 1970s.

24

25 Q. WHY IS THE COMPANY'S STRATIFICATION METHODOLOGY THE MOST
26 APPROPRIATE CLASSIFICATION AND ALLOCATION FOR PRODUCTION PLANT
27 COSTS?

1 A. The Company's methodology is the most theoretically sound of the
2 methodologies available, as it:

- 3 • Recognizes that the Company plans, builds and economically operates
4 over time an optimum mix of generation plant types, which minimizes
5 the total system costs (fixed and variable) over the life of the plants;
- 6 • Recognizes that peaking plants with low capital costs but high operating
7 costs are built to serve customer demand when there are no lower-cost
8 resources available – during times of peak demand. As such, these costs
9 should be allocated based on customer demand at peak times;
- 10 • Recognizes that intermediate and baseload generation resources with
11 higher capital costs are added to provide low-cost energy, which benefits
12 customer classes with high energy consumption. As such, the portion of
13 these costs that are in excess of the cost of a peaking plant should be
14 allocated to classes based on energy consumption; and,
- 15 • Is particularly well-suited for utilities such as NSPM that have a
16 generation mix with various levels of capital intensity.

17

18 When selecting a classification and allocation methodology, the ultimate goal is
19 to select methods that best reflect the reasons the Company incurred a given
20 cost. The long-accepted Stratification methodology fulfills that purpose and has
21 withstood scrutiny over many rate cases.

22

23 Q. DOES THE COMPANY'S STRATIFICATION METHOD REFLECT THE DISPATCH
24 ORDER OF THE COMPANY'S PRODUCTION PLANTS?

25 A. Yes. It is hard for me to comment on Mr. Chriss' concern regarding dispatch
26 issues since he does not provide any details. However, I would respond by
27 saying that Midcontinent Independent System Operator (MISO) dispatches

1 production resources primarily based on their operating costs. While
2 transmission capacity limitations may impact dispatch of renewable resources
3 at times, operating cost is the primary driver for the dispatch order of all
4 production resources.

5
6 Q. HAS MR. CHRISS PROPOSED AN ALTERNATIVE METHOD FOR CLASSIFYING AND
7 ALLOCATING PRODUCTION PLANT COSTS?

8 A. No, he has not proposed an alternative method.

9
10 **B. Classification of Distribution Plant Using the Minimum System**
11 **and Zero Intercept Methods**

12 Q. IS IT WIDELY ACCEPTED THAT ELECTRIC DISTRIBUTION COSTS SHOULD BE
13 CLASSIFIED AS BOTH CUSTOMER- AND DEMAND-RELATED?

14 A. Yes. It is widely accepted at the state, regional, and national levels that
15 distribution costs are driven by two factors: 1) the number of customers on the
16 distribution system, and 2) the demand those customers place on the system.
17 With regard to the national prevalence of this classification, the National
18 Association of Regulatory Utility Commissioners (NARUC) Electric Utility
19 Cost Allocation manual clearly states that both demand and customer
20 components should be considered in classifying distribution costs. Table 6-1 on
21 page 87 of the NARUC manual shows FERC accounts 364-368 should be
22 classified as having demand and energy classifications.

23

1 **Table 6-1 from page 87 of NARUC Electric Utility Cost Allocation Manual**

2

3 FERC Account	Description	Demand Related	Customer Related
4 364	Poles, towers and fixtures	X	X
5 365	Overhead conductors	X	X
6 366	Underground conduit	X	X
7 367	Underground conductors	X	X
8 368	Line transformers	X	X

9 Page 90 of the NARUC manual goes on to say:

10 Two methods are used to determine the demand and customer
11 components of distribution facilities. They are, the minimum-size-of-
12 facilities method, and the minimum-intercept cost (zero-intercept or
13 positive-intercept cost, as applicable) of facilities.

14
15 With respect to the regional and state prevalence of the classification, all
16 Commissions in the four-state region (Minnesota, North Dakota, South Dakota
17 and Wisconsin) accept the customer- and demand-related components of
18 distribution costs. Additionally, all Commissions have accepted the Minimum
19 System method as a means to separate distribution facilities into demand and
20 customer components since the 1990s.

21
22 Q. WHAT IS THE PURPOSE OF CLASSIFYING ELECTRIC DISTRIBUTION COSTS AS BOTH
23 CUSTOMER- AND DEMAND-RELATED?

24 A. The purpose of this classification is to allocate costs according to causation.
25 The *customer*-related portion of the distribution system is that portion that simply
26 makes service available to the customer. The balance of distribution system
27 costs are *capacity*-related. The costs a utility incurs to connect a customer to the
28 distribution grid without regard to the level of customer load is reasonably
29 classified as customer-related and allocated based on number of customers. The

1 capacity-related cost component – those that are not customer-related – has
2 cost causation based on the level of power demanded by customers above the
3 minimum customer-related level. These costs should be allocated on customer
4 demand and are appropriate to recover through volumetric charges.

5

6 Q. CAN YOU PLEASE PROVIDE A REAL-WORLD EXAMPLE OF HOW DISTRIBUTION
7 COSTS ARE INCURRED, CLASSIFIED, AND ALLOCATED?

8 A. Yes. The simple fact that customers are added to the system, in a new
9 development for example, means the distribution system must be extended with
10 new distribution feeders or extensions to existing feeders regardless of the load
11 of those customers. These new connections can be made with the minimum-
12 sized equipment. Additional costs are then required to upgrade distribution
13 facilities that are needed to serve whatever the customer's load will be.

14

15 Also, consider a distribution construction job where the Company deploys
16 construction crews, bucket trucks, trenchers, and other equipment on site.
17 Labor, equipment and overhead costs are incurred to dig trenches and set poles
18 before any conductor or load-related costs are incurred. These are real
19 distribution costs that the utility incurs before any load is planned for the
20 system. Incremental costs are incurred to plan for and install load-related costs
21 that make up the demand-related component of distribution system costs.

22

23 Q. IS IT APPROPRIATE TO CLASSIFY AND ALLOCATE ALL DISTRIBUTION COSTS AS
24 DEMAND-RELATED BASED ON CUSTOMER DEMANDS?

25 A. No. Classifying distribution plant as only demand-related is the most extreme
26 position that can be taken on this issue. This method allocates primary
27 conductors, secondary conductors and transformers based only on demand

1 with no recognition of the customer component. Further, it ignores cost
 2 causation and the well-established tenet that the addition of customers is a
 3 significant determinant of distribution system costs.

4
 5 Q. WOULD CLASSIFYING DISTRIBUTION PLANT AS DEMAND-RELATED RESULT IN A
 6 SIGNIFICANT SHIFT IN CLASS COST RESPONSIBILITY?

7 A. Yes. Compared to past practice established over several rate cases, adopting this
 8 approach would result in a significant sudden shift in costs to the commercial
 9 and industrial demand-billed class. The cost-based revenue deficiency of the
 10 C&I demand class would increase by 25 percent. The change in the adjusted
 11 deficiency for each customer class is shown in Table 1 below.

12
 13 **Table 1**
 14 **Change in the Adjusted Deficiency by Customer Class**
 15 **Distribution Plant Classified as Customer and Demand-Related versus**
 16 **Classified as Demand Only**

17
 18
 19
 20
 21

	Adjusted Deficiency (\$000)		Change	Percent Change
	Distribution Plant Classified as Customer and Demand-Related	Distribution Plant Classified as Demand-Related Only		
Residential	\$7,633	\$5,199	-\$2,434	-31.9%
Non-Demand	\$339	\$111	-\$228	-67.4%
Demand	\$10,424	\$13,067	\$2,643	25.4%
Street Ltg	\$801	\$820	\$19	2.4%
Total	\$19,197	\$19,197	\$0	0.0%

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 23
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 27

1 **III. CONCLUSION**

2

3 Q. PLEASE SUMMARIZE YOUR CONCLUSIONS.

4 A. The methods the Company has used for classifying and allocating production
5 and distribution plant costs are well-established methods accepted by the
6 Commission in past rate cases and most accurately reflect the reasons these
7 costs are incurred. Any alternative approaches should be rejected.

8

9 Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

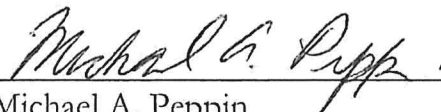
10 A. Yes, it does.

1 STATE OF NORTH DAKOTA
2 BEFORE THE
3 PUBLIC SERVICE COMMISSION
4
5

6 In the Matter of the Application of Northern)
7 States Power Company, a Minnesota Corporation)
8 For Authority to Increase Rates for Electric Service) Case No. PU-20-441
9 in North Dakota)

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11
12
13 **AFFIDAVIT OF**
14 **Michael A. Peppin**
15

16
17 I, the undersigned, being duly sworn, depose and say that the foregoing is the
18 Rebuttal Testimony of the undersigned, and that such Rebuttal Testimony and the
19 exhibits or schedules sponsored by me to the best of my knowledge, information
20 and belief, are true, correct, accurate and complete, and I hereby adopt said testimony
21 as if given by me in formal hearing, under oath.
22

23
24 
25 Michael A. Peppin
26
27
28
29

30 Subscribed and sworn to before me, this 24 day of May, 2021.
31

32 
33 _____
34 Notary Public
35 My Commission Expires: 1/31/2025
36

