MLEC

ENERGY ANALYSIS, REPORTING AND ADVOCACY

Rebuttal Testimony of
Kavita Maini

Before the
North Dakota Public Service Commission

In the Matter of Otter Tail Power Company
Electric Rate Increase Application

CASE NO.: PU-17-398

Exhibit __

June 22, 2018

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I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND OCCUPATION.

A. My name is Kavita Maini. I am the principal and sole owner of KM Energy Consulting, LLC.

Q. ARE YOU THE SAME KAVITA MAINI WHO HAS PREVIOUSLY FILED DIRECT TESTIMONY IN THIS CASE?

A. Yes. I filed direct testimony on behalf of the Midwest Large Energy Consumers (MLEC) regarding revenue requirement, class cost of study, revenue allocation and rate design issues.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. The purpose of my rebuttal testimony is to respond to the North Dakota Public Service Commission (NDPSC) witness, Mr. David Dismukes regarding Class Cost of Service (CCOS) study, revenue allocation and rate design issues.

II. Class Cost of Service (CCOS) Study

Q. WHAT IS MR. DISMUKES' POSITION REGARDING OTTER TAIL POWER COMPANY'S (OTP OR COMPANY) CCOSS?

A. I understand Mr. Dismukes' position regarding OTP's CCOS study to be the following:

1. He does not recommend changes to how fixed production plant should be allocated compared to the Company's approach at the present time. However, he believes that the Company could utilize other methods.
2. He opposes the Company's methodology of allocating transmission costs to customer classes and recommends an alternative method.
3. He opposes the classification and allocation of distribution costs to customer classes and recommends an alternative method.

Q. DO YOU SUPPORT MR. DISMUKES' POSITION?

A. No. I oppose all of his CCOS study related recommendations as discussed below.

A. Fixed Production Plant Classification and Allocation

Q. WHAT DOES MR. DISMUKES WANT THE COMMISSION TO CONSIDER WITH RESPECT TO ALLOCATING FIXED PRODUCTION PLANT?

A. Mr. Dismukes does not appear to oppose the use of the E-8760 allocator. However, he believes that other energy weighting approaches such as the Equivalent Peaker (EP) method would be more appropriate and less data intensive.

Q. HOW DO YOU RESPOND?

A. Mr. Dismukes appears to be confusing allocation with classification. As a point of clarification, the E-8760 allocator is used to *allocate* fixed production plants classified as energy related, to the customer classes while the EP method is used in the classification step to *classify* fixed production plant related costs as demand or energy related. It should be noted that OTP uses the EP method to *classify* fixed production plant into demand and energy components and not to *allocate* fixed production plant.

As noted in my direct testimony, this EP method disproportionately *classifies* fixed production plant related costs to energy, which shifts costs to high load factors customers and classes that utilize the system more efficiently. Also, as noted in my direct testimony, I believe a more preferable approach would be to classify all fixed production plant related costs as demand related and allocate on the basis of the Company's D1 allocator.

The 8760 allocator method of *allocation* is more appropriate and reflective of cost causation than the flat energy allocator as it properly accounts for time and load variations. As for data intensity, the Company has not cited any concerns about data intensity; it already has the data necessary to calculate the allocator; and, the Company has appropriately complied with a past rate case Commission order.

B. Transmission Cost Allocation to Customer Classes

Q. HOW DOES THE COMPANY CURRENTLY *ALLOCATE* TRANSMISSION COSTS?

A. The Company's current method of allocating transmission costs is based on the each class' contribution to the Company's average annual six-hour transmission peak demand. OTP is a winter peaking utility.

Q. WHAT DOES MR. DISMUKES RECOMMEND WITH RESPECT TO ALLOCATING TRANSMISSION COST TO CUSTOMER CLASSES?

A. Mr. Dismukes recommends that the transmission costs should instead be allocated to customer classes on the basis of 12 coincident peaks (12CP). The 12CP method assigns class cost responsibility based on the loads that occur coincident with each of the Company's twelve monthly system peak demands.

Q. DOES THE 12CP METHOD ACCURATELY RECOGNIZE THE COMPANY'S SYSTEM LOAD CHARACTERISTICS?

A. No. The 12CP method places equal weight on all monthly peaks meaning that low demand months such as May and October are treated the same as December, the highest peaking month. As noted in the NARUC manual, the 12CP approach is more applicable in a system where "significant variations in monthly demand are not present".[1] However, the Company's data for North Dakota shows significant variations where the monthly demands are significantly lower in the shoulder and the summer months compared to the highest peak month.[2] **Table 1** shows that the monthly peak demands in shoulder and summer months are less than 80% of the highest peak allowing for adequate opportunity for maintenance.

[1] See NARUC Manual, page 79.
[2] See David Dismukes WP-Plant Allocators, CP-Transmission tab (2018Transmission CP with losses).

Table 1: Monthly Peak Demand as a Percent of Highest Peak Demand

	Percent of highest peak
April	74.3%
May	63.4%
October	75.9%
November	79.1%
June	69.3%
July	77.2%
August	77.0%
September	67.8%

Q. MR. DISMUKES INDICATES THAT THE 12CP METHOD IS USED BY FERC TO DETERMINE THE REVENUE REQUIREMENT FOR TRANSMISSION AND SHOULD BE THE METHOD USED IN RETAIL COST CAUSATION. IS THE FERC METHOD RELEVANT IN DETERMINING COST CAUSATION AT A RETAIL LEVEL?

A. No. The costs causation drivers at the retail level should be the primary determinant. The transmission system must be capable of accommodating the highest peak demands. The winter peak demand is the predominant cost causer. Therefore, each class' contribution to the Company's average annual six-hour transmission peak demand adequately follows cost causation.

Thus, I do not support Mr. Dismukes' recommendation and I recommend that the Company's current method of allocating transmission costs based on the each class' contribution to the Company's average annual six-hour transmission peak demand continue to be utilized.

C. Distribution Cost Classification and Allocation

Q. WHAT DOES MR. DISMUKES RECOMMEND WITH RESPECT TO CLASSIFYING FIXED CERTAIN DISTRIBUTION PLANT?

A. Mr. Dismukes opposes the Company's Minimum Size System (MSS) approach to classify certain distribution plant as customer and demand related. Instead, Mr. Dismukes recommends that all such distribution plant should be classified as 100% demand related with no classification as customer related.

Q. WHICH SPECIFIC DISTRIBUTION PLANT RELATED COSTS IS MR. DISMUKES REFERRING TO?

A. Mr. Dismukes is referring to distribution related costs encompassed in FERC accounts 364-368. The costs are related to equipment such as poles, towers and fixtures (FERC account 364), overhead conductors and devices (FERC account 365), underground conduit (FERC account 366), underground conductors and devices (FERC account 367) and line transformers (FERC account 368). The Company uses a Minimum-size System (MSS) approach to separate distribution costs into demand and customer related components.

Q. DO YOU AGREE WITH MR. DISMUKES' RECOMMENDATION TO CLASSIFY THE FIXED DISTRIBUTED PLANT RELATED COSTS OF FERC ACCOUNTS 364-368 AS 100% DEMAND RELATED?

A. No. This approach deviates from the cost causative drivers for the distribution network and ignores the important consideration that there are customer costs for connecting to the system irrespective of demand. The distribution system (associated with FERC accounts 364-368) is developed to serve a dual function:

1. It must be capable of delivering or hooking up service to customers' residences or businesses (customer related costs); and
2. It must be capable of ensuring that the distribution system is large enough to provide reliable service (demand related costs).

The MSS method is commonly used by electric utilities to classify certain fixed distribution costs as customer and demand related. The NARUC manual also notes that the "number of poles, conductors, transformers, services, and meters are directly related to the number of customers on a utility's system."[3]

[3] See NARUC Manual, page 90, 1992 Edition.

To illustrate a real world practical example of customer related costs experienced by utilities in constructing the distribution network, Xcel Energy's witness Mr. Michael Peppin provided the following in his rebuttal testimony in the utility's 2015 rate case in Minnesota:

> Consider a distribution construction job where the Company deploys construction crews, bucket trucks, trenchers, and other equipment on site. Labor, equipment and overhead costs are incurred to dig trenches and set poles before any conductor or load-related costs are incurred. **These are real distribution costs that the utility incurs before any load is planned for the system** (emphasis added)…. [4]

Thus, these are "customer–related" costs for hooking up customers and providing access to the grid. Incremental costs are incurred to plan for and install load-related costs that are classified as "demand related". Thus, it is unrealistic to assume that no customer related costs are incurred in construction the distribution network.

Q. MR. DISMUKES MODIFIED THE COMPANY'S DISTRIBUTION ALLOCATORS, D3 AND D4 TO IMPLEMENT HIS 100% DEMAND ALLOCATION FOR CERTAIN DISTRIBUTION PLANT. DO YOU SUPPORT THESE MODIFICATIONS?

A. No. Since I do not agree with Mr. Dismukes approach of classifying certain distribution plant related costs on a demand basis only, I do not support these modifications.

D. CCOSS Conclusions

Q. IN SUMMARY, WHAT ARE YOUR RECOMMENDATIONS REGARDING MR. DISMUKES' CHANGES TO THE COMPANY'S CCOS STUDY?

A. I recommend that the Commission deny Mr. Dismukes' recommendations:

1. To consider allocators other than the E8760 allocators for production costs classified as energy related;
2. For allocating transmission costs to customer classes on the basis of 12CP; and
3. To classify certain distribution plant on the basis of 100% demand as well as his modifications to the D3 and D4 allocators respectively.

[4] See Michael Peppin Rebuttal Testimony in Minnesota docket, 15-826, pages 5-6.

III. Revenue Apportionment

Q. WHAT IS MR. DISMUKES' PROPOSAL FOR REVENUE APPORTIONMENT TO CLASSES?

A. Mr. Dismukes proposes to utilize his alternative CCOS study results for revenue apportionment to classes. He indicates the following on page 55 of his testimony with respect to the method for revenue apportionment:

> In the first step, each of the under-earning classes is assigned an increase that is 1.25 times the system average increase. In the second step, the residual revenue deficiency between the target rate of return and the first step revenue increase is allocated to the remaining classes in relation to their current test year revenues.

Q. WHAT YARDSTICK DID HE USE TO ASCERTAIN WHETHER CUSTOMER CLASSES WERE OVER OR UNDER EARNING?

A. He used the Relative Rate of Return (RROR). The RROR is calculated as the ratio between each class' rate of return versus the Company's rate of return. From an equity perspective, all classes should have an RROR of 1, meaning that all classes are covering their costs and contributing the same rate of return as the Company's overall rate of return – no more and no less.

Q. DID MR. DISMUKES COMPARE THE RROR IN THE CURRENT CASE TO THE COMPANY'S PREVIOUS CASE IN 2008?

A. Yes. Mr. Dismukes used OTP's CCOS study results from the previous case and the current case and provided the table below (**Table 2**). He indicated that while the RROR from the residential class more or less stayed the same, the RRORs for General Service (GS) and Large General Service (LGS) class has declined in this case compared to the previous case.

Table 2: Comparison of Class RRORs: Previous v. Current OTP Case[5]

	Residential	Farms	General Service	Large General Service	Irrigation	Outdoor Lighting	OPA	Controlled Service Water Heating	Controlled Service Interruptible	Controlled Service Demand
Case No. PU-08-862 (as Filed)										
Return	3.51%	2.51%	12.23%	12.09%	-3.21%	-0.59%	-0.01%	-2.27%	-9.54%	1.34%
Relative ROR	0.51	0.36	1.77	1.75	-0.46	-0.09	0.00	-0.33	-1.38	0.19
Case No. PU-08-862 (Approved)										
Return	4.85%	3.50%	12.90%	12.09%	-2.02%	3.50%	3.33%	-0.84%	-3.84%	3.75%
Relative ROR	0.60	0.43	1.60	1.50	(0.25)	0.43	0.41	(0.10)	(0.48)	0.46
Case No. PU-17-398										
Return	2.71%	2.07%	7.67%	8.72%	-3.42%	3.01%	1.88%	-0.90%	-1.16%	5.31%
Relative ROR	0.52	0.40	1.47	1.67	(0.66)	0.58	0.36	(0.17)	(0.22)	1.02

Q. WHAT ARE YOUR OBSERVATIONS WITH REGARDS TO THE RROR COMPARISONS BETWEEN THE CURRENT AND PREVIOUS CASE?

A. From my perspective, the important takeaways are that:

- The RRORs for GS and LGS classes have not changed materially and continue to be the significant over earning classes with RRORs of 1.47 and 1.67 respectively. All other classes continue to under earn except the Controllable Service Demand class has switched from an under earning class to a class that is earning approximately the same rate of return as the Company; and
- Irrigation, Controllable Service Water Heating and Controllable Service Interruptible continue to have negative RRORs.

In my opinion, these takeaways imply that greater strides need to be taken in this proceeding to move classes closer to cost and foster equity amongst classes.

Q. PLEASE COMMENT ON MR. DISMUKES' RECOMMENDATION REGARDING REVENUE APPORTIONMENT.

A. I find Mr. Dismukes' approach to be problematic for the following reasons:

- First, he utilizes his recommended CCOS study results for revenue allocation purposes. As discussed earlier, Mr. Dismukes' CCOS study does not appropriately reflect cost causation and I do not support any of the changes he has recommended to OTP's CCOS study. Because his revenue allocation is based on a faulty CCOS study, it is not an appropriate basis for a class revenue distribution.

[5] See Dismukes Direct Testimony Exhibit DED-6.

Therefore, I do not support utilizing his recommended CCOS for revenue allocation purposes;

- Second, he does not appear to follow his method of assigning 1.25 times the system average increase to the residential class which also has an RROR less than one in his own CCOS study results (See Exhibit DED-7);
- Third, while his revenue allocation method attempts to move under earning classes towards cost by giving them 1.25 times the system average increase, there is no corresponding movement to cost for the classes that are over earning. For example, his CCOS study shows that the GS and LGS classes have RRORs greater than 1 (1.56 for GS and 1.39 for LGS) and there is no movement towards cost for these classes; and
- Fourth, with respect to the under earning classes, his method does not result in moving classes towards cost relative to each other. For example, Mr. Dismukes' CCOS study results show that there are three classes with negative RRORs. His method would treat these classes the same as those with positive RRORs less than 1 or less than 0, when arguably the classes with the negative RRORs should get a higher increase to get closer to their cost responsibility. Mr. Dismukes' revenue allocation results are shown in Table 3 below. All under earning classes have the same rate increase.[6]

Table 3: Dismukes CCOS Related RRORs by Class and Recommended Revenue Allocation[7]

	Total North Dakota Distribution	Residential	Farms	General Service	Large General Service	Irrigation	Outdoor Lighting	OPA	Controlled Water Heating	Controlled Service Interrupt	Controlled Service Deferred
Rate of Return on Rate Base ("ROR")	5.21%	4.91%	1.44%	8.11%	7.22%	-5.42%	4.03%	2.75%	-3.42%	-4.67%	1.60%
Relative Rate of Return ("RROR")	1.00	0.94	0.28	1.56	1.39	(1.04)	0.77	0.53	(0.66)	(0.90)	0.31
Dismukes Recommended Rate Increase	10.62%	10.26%	13.27%	10.26%	10.26%	13.27%	13.27%	13.27%	13.27%	13.27%	13.27%

[6] As noted earlier, the residential class should also get the same increase according to his method as the other under earning classes. However, he did not incorporate the first step of assigning 1.25 times the system increase to this class in the first step.

[7] See Dismukes Direct Testimony, Exhibit DED-7.

IV. Rate Design

Q. WHAT IS MR. DISMUKES RECOMMENDATION REGARDING THE RATE DESIGN FOR THE LGS CLASS?

A. Mr. Dismukes' primary recommendations include the following for the LGS class rate design:

- Customer charges should be increased by the system average increase;
- Any revenue responsibilities not recovered through existing customer charge revenues be recovered through the energy charges; and
- Retain the existing relationship between the demand charge and the energy rate and recommend allocating the increase on an equal percentage basis between the two components.

Q. HOW DO YOU RESPOND?

A. As discussed in my direct testimony, I believe that larger increases on the demand charges relative to the energy charges are appropriate. Since the major cost drivers in this case are related to fixed infrastructure, customers should get appropriate pricing signal through rates that capacity is expensive. By contrast, if rates are designed such that there is recovery of fixed costs through volumetric charges instead of demand charges; the pricing signals are distorted and have the potential of increasing costs for all customers.

For example, if fixed generation costs are recovered through variable charges, it distorts the pricing signal to the customers. Specifically, by including such costs in the energy charge, the demand charge is kept artificially low, thus implying that generation capacity is cheaper than is actually the case. Similarly, the energy charge is now artificially high, thus implying that energy costs are more expensive than is actually the case. Such a signal could then result in customers choosing to use less energy but contributing more to peak conditions, which increases the need for capacity thereby increasing system costs, which once again, must be recovered from customers through higher rates. Such types of distorted pricing signals reduce economic efficiency, in addition to recovering costs from customers that are not driving the need for the expenditures.

For these reasons, I do not support Mr. Dismukes' recommendations to the LGS rate design.

Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

A. Yes.