

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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1 **I. INTRODUCTION**

2 Q. PLEASE STATE YOUR NAME AND OCCUPATION.

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

5
6 Q. ARE YOU THE SAME KAVITA MAINI WHO HAS PREVIOUSLY FILED DIRECT TESTIMONY IN
7 THIS CASE?

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

11
12 Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

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

16
17 **II. Class Cost of Service (CCOS) Study**

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

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

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

28
29 Q. DO YOU SUPPORT MR. DISMUKES' POSITION?

30 A. No. I oppose all of his CCOS study related recommendations as discussed below.
31

32 **A. Fixed Production Plant Classification and Allocation**

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

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

38
39 Q. HOW DO YOU RESPOND?

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

46
47 As noted in my direct testimony, this EP method disproportionately *classifies* fixed
48 production plant related costs to energy, which shifts costs to high load factors customers and
49 classes that utilize the system more efficiently. Also, as noted in my direct testimony, I
50 believe a more preferable approach would be to classify all fixed production plant related
51 costs as demand related and allocate on the basis of the Company's D1 allocator.

52
53 The 8760 allocator method of *allocation* is more appropriate and reflective of cost causation
54 than the flat energy allocator as it properly accounts for time and load variations. As for data
55 intensity, the Company has not cited any concerns about data intensity; it already has the data
56 necessary to calculate the allocator; and, the Company has appropriately complied with a past
57 rate case Commission order.

58
59 **B. Transmission Cost Allocation to Customer Classes**

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

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

64

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

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

71

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

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

83

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85

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87

88

¹ See NARUC Manual, page 79.

² See David Dismukes WP-Plant Allocators, CP-Transmission tab (2018Transmission CP with losses).

89

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%

90

91

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

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

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

105

106 C. **Distribution Cost Classification and Allocation**

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

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

113

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

115 A. Mr. Dismukes is referring to distribution related costs encompassed in FERC accounts
116 364-368. The costs are related to equipment such as poles, towers and fixtures (FERC
117 account 364), overhead conductors and devices (FERC account 365), underground
118 conduit (FERC account 366), underground conductors and devices (FERC account 367)
119 and line transformers (FERC account 368). The Company uses a Minimum-size System
120 (MSS) approach to separate distribution costs into demand and customer related
121 components.

122

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

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

130 1. It must be capable of delivering or hooking up service to customers' residences or
131 businesses (customer related costs); and

132 2. It must be capable of ensuring that the distribution system is large enough to
133 provide reliable service (demand related costs).

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

³ See NARUC Manual, page 90, 1992 Edition.

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

142

143 Consider a distribution construction job where the Company deploys
144 construction crews, bucket trucks, trenchers, and other equipment on site.
145 Labor, equipment and overhead costs are incurred to dig trenches and set
146 poles before any conductor or load-related costs are incurred. **These are**
147 **real distribution costs that the utility incurs before any load is**
148 **planned for the system (emphasis added)....**⁴
149

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

154

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

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

160

161 **D. CCOSS Conclusions**

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

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

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

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

170 **III. Revenue Apportionment**

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

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

175 In the first step, each of the under-earning classes is assigned an increase
176 that is 1.25 times the system average increase. In the second step, the
177 residual revenue deficiency between the target rate of return and the first
178 step revenue increase is allocated to the remaining classes in relation to
179 their current test year revenues.
180

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

183 A. He used the Relative Rate of Return (RROR). The RROR is calculated as the ratio
184 between each class' rate of return versus the Company's rate of return. From an equity
185 perspective, all classes should have an RROR of 1, meaning that all classes are covering
186 their costs and contributing the same rate of return as the Company's overall rate of
187 return – no more and no less.
188

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

191 A. Yes. Mr. Dismukes used OTP's CCOS study results from the previous case and the
192 current case and provided the table below (**Table 2**). He indicated that while the RROR
193 from the residential class more or less stayed the same, the RRORs for General Service
194 (GS) and Large General Service (LGS) class has declined in this case compared to the
195 previous case.
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197
198
199
200
201

202

Table 2: Comparison of Class RRORs: Previous v. Current OTP Case⁵

	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

203

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

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

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

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

216

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

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

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

⁵ See Dismukes Direct Testimony Exhibit DED-6.

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

- 227 • Second, he does not appear to follow his method of assigning 1.25 times the
 228 system average increase to the residential class which also has an RROR less than
 229 one in his own CCOS study results (See Exhibit DED-7);
- 230 • Third, while his revenue allocation method attempts to move under earning
 231 classes towards cost by giving them 1.25 times the system average increase, there
 232 is no corresponding movement to cost for the classes that are over earning. For
 233 example, his CCOS study shows that the GS and LGS classes have RRORs
 234 greater than 1 (1.56 for GS and 1.39 for LGS) and there is no movement towards
 235 cost for these classes; and
- 236 • Fourth, with respect to the under earning classes, his method does not result in
 237 moving classes towards cost relative to each other. For example, Mr. Dismukes'
 238 CCOS study results show that there are three classes with negative RRORs. His
 239 method would treat these classes the same as those with positive RRORs less than
 240 1 or less than 0, when arguably the classes with the negative RRORs should get a
 241 higher increase to get closer to their cost responsibility. Mr. Dismukes' revenue
 242 allocation results are shown in Table 3 below. All under earning classes have the
 243 same rate increase.⁶

244
 245 **Table 3: Dismukes CCOS Related RRORs by Class**
 246 **and Recommended Revenue Allocation⁷**

	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%

247
 248
 249

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.

250 **IV. Rate Design**

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

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

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

261

262 Q. HOW DO YOU RESPOND?

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

269

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

280

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

283

284 Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

285 A. Yes.

286