

DEPARTMENT OF PUBLIC SERVICE REGULATION
BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MONTANA

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IN THE MATTER OF THE APPLICATION) REGULATORY DIVISION
Of MONTANA-DAKOTA UTILITIES CO.,)
a Division of MDU Resources Group, Inc.,) DOCKET NO. D2015.6.51
for Authority to Establish Increased Rates for)
Electric Service in the State of Montana)

**DATA REQUESTS OF THE MONTANA CONSUMER COUNSEL
TO MONTANA-DAKOTA UTILITIES CO.**

MCC-113

Regarding: Demand Allocation Factors
Witness: Sara J. Cardwell

Please provide in electronic format supporting documentation and worksheets for the 12-CP and 4-CP allocation factors provided in response to data request MCC-090. Also please provide the 1-CP allocation factor for each of the rate classes in Schedule L-3 along with its supporting worksheets in electronic format.

MCC-114

Regarding: Demand and Energy Determinants
Witness: Sara J. Cardwell

Please explain in detail if the source data for all demand and energy determinants corresponding to each class and used throughout the embedded cost of service study and the marginal cost study are from 2014 actual billings or they otherwise correspond to actual 2014 demand and energy for MDU's system in Montana.

MCC-115

Regarding: Class Load Factors
Witness: Sara J. Cardwell

- a. Please provide in electronic format all supporting documentation, worksheets and calculations for the development of the class load factors used in calculating the non-coincident peak (NCP) demand for each class at meter, as shown in the calculation of the Average & Excess Demand allocator (Factor 2). These class load factors are also shown on tab “Demand and Energy Data” of the file Marginal Cost Study Exhibit SJC1-SJC11.xlsx.

- b. Tab “Demand and Energy Data” of the file Marginal Cost Study Exhibit SJC1-SJC11.xlsx shows System Coincidence percentages for each rate class. Please explain in detail how they were calculated and provide all data and supporting documentation in electronic format.

MCC-116

Regarding: Average & Excess Demand Allocator
Witness: Sara J. Cardwell

Please explain in detail why an Average & Excess demand allocator (Factor No. 2) based on non-coincident peak demand results in better allocation of production and transmission cost rather than an Average & Excess demand allocator based on coincident peak demand.

MCC-117

Regarding: Minimum and Normal System Analysis
Witness: Sara J. Cardwell

Please provide in electronic format all supporting documents and worksheets used in developing Attachment A included in response to MCC-093. In other words, please provide the complete analysis used to classify Poles, Overhead Conductors and URD Conductor as customer and demand related, including all data, formulas, itemized cost for the minimum and normal system, and all supporting source documentation.

MCC-118

Regarding: Weighted Customers
Witness: Sara J. Cardwell

Please provide in electronic format all supporting documents, cost bases and worksheets, with formulas and links intact, for the development of customer weights for meters, services, transformers and customers accounts as shown on Statement Workpapers, Statement L, page L-14.

MCC-119

Regarding: Statement L – Line Transformer Investment
Witness: Sara J. Cardwell

In response to MCC-094 you refer to Statement Workpapers Statement L, page L-23 for the calculation of customer weights for line transformers. Please provide an electronic copy, including all formulas, links, workpapers, cost bases and supporting documents, of these calculations, including pages L21 through L24, which relate to meters, services and customer accounts. Please provide detailed information about the typical cost of each type of equipment or expense required to serve each customer class, as well as how the base cost was determined.

MCC-120

Regarding: Annual Cost of a Combustion Turbine
Witness: Sara J. Cardwell

In reference to the workpapers – Attachment A provided in response to MCC-097, please provide in electronic format all data, assumptions and calculations used in developing a 2016 capacity cost of \$816.00/KW for a combustion turbine.

MCC-121

Regarding: Marginal Transmission Costs
Witness: Sara J. Cardwell

In your testimony at page 15, lines 9 to 10, you state: “The total cost, expressed in 2017 dollars, is divided by the peak load growth to yield a cost per kW.” In your marginal cost study you use an average peak ranking instead of the peak load growth between 2005 to 2013. Please explain in detail what this average peak ranking represents and why it should be used instead of the 2005-2013 peak load growth.

MCC-122

Regarding: Marginal Cost – Distribution Transformers
Witness: Sara J. Cardwell

- a. Please provide in electronic format all supporting documents, cost basis and worksheets, with formulas and links intact, used in developing the table shown on the Excel file of the Marginal Cost Study, tab “Distribution-Transformer Costs” (also Statement Workpapers page L-44), including the data used in calculating the “Zero-Intercept Cost” and slopes for single phase and three phase transformers.
- b. Please state whether 33,069 Interconnected System Transformers is the total number of MDU transformers in Montana, as shown on the embedded cost study, and please explain how representative a sample of 24,849 transformers, as shown on the tab described above, is to the total number of MDU-Montana transformers.

MCC-123

Regarding: Distribution Plant Allocation
Witness: Sara J. Cardwell

Tab “distribution plant” of Statement L (Embedded Cost of Service) shows that the 84/16 split between customer and demand for Poles, OH & UG Conductors & Conduit comes from the “Distribution Engineering Worksheet.” Please provide a copy of this worksheet in electronic format, including all underlying data and calculations, supporting documents and formulas and links intact.

MCC-124

Regarding: Marginal Distribution Line Costs
Witness: Sara J. Cardwell

- a. Please provide an electronic copy, with all source data, calculations and supporting documentation, of Statement Workpapers page L-43 and Attachment A provided in response to MCC-102.
- b. Please explain in detail how the unit/mile costs shown on Attachment A for OHD Three Phase Line, Pole, URD Three Phase Line represent a Normal System, what the difference is between the calculation for these normal system and the calculation for a Minimum System.

- c. On line 2a) Labor Loading shown on page 1 of Attachment A, it shows a value of 50.0%. Please explain what this 50.0% represents with respect to Total Labor with Loading.
- d. Please define in detail the meaning of ES & GA, and how the associated percentages were determined.
- e. Please explain why the total number of customers for Glendive District and Wolf Point District (25,683) is not the same as the Montana Jurisdiction Total Number of Customers (28,206).
- f. Please provide all detail and supporting data for the Total Material Cost (non-exempt and exempt) of \$19,212 (OHD Three Phase Line), \$10,247 (Pole) and \$39,406 (URD Three Phase Line), as shown on Attachment A provided in response to MCC-102.
- g. Please verify if the cost amounts shown on Attachment A and Statement Workpapers page L-43 are 2014 dollars.

MCC-125

Regarding: Monthly Billing Determinants
Witness: Sara J. Cardwell

Data request MCC-107 asked monthly billing determinants for each of the customer classes. However, response to MCC-107 only provided monthly billing determinants at the Primary, Secondary and Substation level. Please provide monthly billing determinants by customer classes.

MCC-126

Regarding: Statement M
Witness: Tamie A. Aberle

- a. Please explain the basis and show supporting calculations for determining the winter rate differential with respect to summer rate for the different classes as applicable (e.g., Residential Electric Service Rate 10 equal to \$-0.01997 / kwh, and Small General Service Rate 20 equal to \$-0.01880 / kwh, etc), as shown on the different rate tabs of file: Statement M Exhibit TAA-1_TAA-2.xlsx.

- b. Please explain the basis and show supporting calculations for determining the secondary rate differential with respect to primary rate (e.g., Small General Service Rate 20 equal to \$0.00100 / kwh, etc), as shown on the different rate tabs of file Statement M Exhibit TAA-1_TAA-2.xlsx.

- c. Please explain the difference between the two kwhs values (135,654,617 and 113,115,178) related to winter rate that are shown on tab Rate 10 of the file Statement M Exhibit TAA-1_TAA-2.xlsx.