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September 23, 2015

Ms. Tamie A. Aberle
Director of Regulatory Affairs
Montana-Dakota Utilities Co.
400 North Fourth Street
Bismark, North Dakota 58501

RE: Data Request in Docket D2015.6.51

Dear Ms. Aberle,

Enclosed please find data requests of the Montana Public Service Commission, numbered PSC-009 through PSC-032, to Montana-Dakota Utilities Co. in the docket referenced above. If you have any questions, please contact me at (406) 444-6359 or Mike Dalton at (406) 444-6185.

Sincerely,

Will Rosquist
Chief, Economics and Rate Design Bureau
Montana Public Service Commission

Enclosure

cc: Service List

Service Date: September 23, 2015

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

IN THE MATTER OF the Application of the Application of Montana-Dakota Utilities Co. for Authority to Establish Increased Rates for Electric Service in the State of Montana	))))	REGULATORY DIVISION DOCKET NO. D2015.6.51

DATA REQUESTS PSC-009 THROUGH PSC-032 OF THE MONTANA PUBLIC SERVICE COMMISSION TO MONTANA-DAKOTA UTILITIES CO.

PSC-009

Regarding: Identifying least cost resources
Witness: Kivisto, pp. 4-8

Among the primary drivers of MDU's $11.8 million per year revenue increase request, you identify generating plant modifications needed to comply with air quality regulations and indicate that costs associated with those plant modifications account for 32 percent of the requested increase. Provide the percentage contributions of the other primary drivers you discuss: generating plant additions needed to serve load, such as Thunder Spirit, Lewis & Clark RICE units, and Hesket III; and transmission investments and impacts from the WAPA/Basin move to SPP.

PSC-010

Regarding: Identifying least cost resources
Witness: Skabo, p. 3

For each of the listed resources identified through the Integrated Resource Planning process, specify which Integrated Resource Plan(s) (IRP) identified the resource as a "best" option.

PSC-011

Regarding: MATS
Witness: Skabo, p. 7

a. Confirm that the reagent expense impact on variable production costs were accounted for in prior IRP modeling and in the 2015 IRP analysis.

b. Quantify the impact of the reagent expenses on the per unit production costs of the affected plants.

PSC-012

Regarding: Regional Haze Rule
Witness: Skabo, p. 10

a. Identify the alternatives and their associated costs that the Big Stone owners compared to the construction and operation costs of Big Stone with AQCS.

b. Provide a copy the owners' analysis of the alternatives to the construction and operation costs of Big Stone with AQCS.

c. Provide a copy of the South Dakota Regional Haze SIP.

PSC-013

Regarding: Big Stone AQCS
Witness: Skabo, p. 11-12.

a. Provide a copy of the North Dakota Public Service Commission Order accepting the AQCS project as prudent.

b. Provide the 2011 IRP cost effectiveness analyses of the AQCS project.

c. Provide the results of the additional modeling that determined that the AQCS project remained a least cost option even if the plant was only able to run through 2019. Clarify whether the analysis was included in an IRP filed with the Montana Public Service Commission.

PSC-014

Regarding: Summer and winter peaks
Witness: Neigum, p. 4, Exhibit_(DJN-1)

a. Exhibit_(DJN-1) appears to indicate that the difference between the summer and winter peaks narrowed starting in about 2008. Is current growth in winter peak

demand significantly different, statistically, than growth in summer peak demand? If so, what accounts for the difference and what are the resource planning implications?

b. Provide MDU's adjusted 50/50 peak winter load in 2014.

c. How would MDU's current least-cost resource plan and system operations change if MDU expected to transition from summer-peaking to winter-peaking?

d. If MDU were to transition to winter peaking, would MISO's determination of MDU's peak load obligations change?

PSC-015

Regarding: Summer and winter peaks
Witness: Neigum, p. 5

a. Describe the pricing and terms of the 2012, 2013, and 2014 WE Energies annual capacity purchase agreements. In particular, identify any quality differences in the capacity obtained through such purchases and an owned capacity resource such as the Hesket III gas combustion turbine.

b. Clarify whether the WE Energies capacity purchase agreements were three separate resource acquisitions, as shown on p. 5, or a single, three-year agreement, as described on p. 7.

c. Are capacity purchase agreements such as the WE Energies agreements available for longer time periods, e.g., 5, 10, or 15 years? Explain the basis for your answer.

d. Describe why MDU continues to plan for and acquire generating plants to supply its retail customers despite being a member of MISO. Discuss MISO's function(s) and how those functions affect MDU's approach to integrated resource planning.

PSC-016

Regarding: June 2010 RFP for energy and capacity resource
Witness: Neigum, p. 7

Provide the June 2010 RFP and the analysis of bids and alternative supply side resources available to MDU as part of its 2011 IRP.

PSC-017

Regarding: Basin Electric seasonal generation redispatch
Witness: Neigum, p. 10

a. Further describe how the Basin Electric seasonal generation redispatch mitigates potential curtailment due to transmission constraints and the basis for pricing this service.

b. Explain whether interconnecting the Lewis & Clark RICE project into the existing WBI Energy pipeline will constrain capacity on that pipeline or otherwise affect service to the Lewis & Clark Station.

c. Is the existing WBI Energy pipeline capable of serving a future expansion of the RICE project without constraining pipeline capacity or otherwise affecting service to the Lewis & Clark Station? If not, please explain.

d. Provide the analysis that shows construction of the Lewis & Clark RICE project improves system reliability and offsets the need to construct more expensive new electric transmission facilities into the Bakken area.

PSC-018

Regarding: Thunder Spirit wind project
Witness: Neigum, p. 13-17

a. Provide a comparison of the wind costs modeled in the 2013 IRP and the wind pricing associated with the Thunder Spirit PPA executed in October 2013.

b. Provide MDU's analysis of the Thunder Spirit and other wind proposals submitted in response to the March 2013 RFP.

c. Describe the price increases and other PPA amendments that would have been necessary for Thunder Spirit Wind to obtain financing.

d. Provide any economic analysis MDU performed that supports the statement (on p. 15), "Montana-Dakota determined it was advantageous and in the best interest of its customers to consider owning and operating Thunder Spirit as an alternative to the PPA arrangement."

e. Describe the differences between the amended PPA MDU executed with Allete Clean Energy and the PPA initially executed with Thunder Spirit Wind, and provide the terms of the Asset Purchase Agreement executed with Allete Clean Energy.

PSC-019

Regarding: Thunder Spirit, additional EGEAS model runs
Witness: Neigum, pp. 24-26

a. List the resource alternatives available to EGEAS in the additional modeling runs.

b. Provide the timeframe of the additional EGEAS modeling evaluation.

c. Provide the timeframe for the preliminary 2015 IRP modeling of Thunder Spirit.

PSC-020

Regarding: Market vs. owned resources
Witness: Neigum, p. 29

a. Provide a comparison of the cost of the WE Energies capacity purchases shown on p. 5 to the MISO-calculated cost of new resources for the years covered by the capacity purchases.

b. Clarify whether the simple cycle combustion turbine revenue requirement MISO calculates to determine the cost of new resources includes expected fuel costs or just the fixed costs of the plant.

PSC-021

Regarding: MISO markets
Witness: Neigum, pp. 30-31

a. Describe the extent to which MISO conducts footprint-wide long-term integrated resource planning to identify optimal resource expansion strategies.

b. What percentage of the retail load within the MISO footprint is served by state regulated vertically integrated utilities such as MDU?

c. If MISO produces forecasts of energy and capacity prices for future time periods, provide the most recent forecasts for the area of the footprint covering MDU's service territory and a description of the methods MISO uses to produce the forecasts.

d. If MISO does not produce forecasts of energy and capacity prices for future time periods, describe how MDU forecasts prices for MISO market purchases for purposes of long-term resource planning.

PSC-022

Regarding: Load Forecast
Witness: Neigum

a. Provide any updates to the 2015 IRP load forecast that MDU develops during the course of the proceeding in this Docket. (See 2015 Integrated Resource Plan Vol. 1, p. 23.)

b. How would MDU's near term action plan be affected by a significant drop in expected load due to slowed growth in the Bakken area?

c. Provide any Bakken-specific load forecasts MDU has developed

PSC-023

Regarding: Embedded cost study
Witness: Cardwell, pp. 4-5

a. Provide three-year average (2012 – 2014) annual capacity factors for: 1) MDU's share of the Big Stone Station, 2) the Lewis & Clark Station, 3) the Hesket Station (Units 1 & 2), and 4) MDU's share of the Coyote Station.

b. Provide three-year (2012 – 2014) average monthly energy production figures for the resources listed in part (a).

c. Provide three-year (2012 – 2014) average monthly minimum system loads.

d. Are the resources listed in part (a) primarily energy resources? Why or why not?

e. Explain MDU's decision to allocate production investments related to its baseload coal facilities on the AED factor while allocating production investments related to its wind facilities on a combined energy (80%) – AED (20%) factor.

PSC-024

Regarding: Embedded cost study, Statement L work papers
Witness: Cardwell

The Statement L work papers, pp. L-12 and L-13 show the development of the class AED allocators (Factor 2). Page L-13 indicates that the Montana peak demand of 130,289 KW is a three-year average for July.

a. Explain MDU's decision to use a three-year average for July.

b. Page L-59 in the Statement L work papers shows Montana non-coincident peak demand for the years 2012 – 2014. Explain MDU's decision not to use those non-coincident peak figures in the calculation of the AED allocators.

PSC-025

Regarding: Average & Excess Demand allocator (factor #2)
Witness: Cardwell

a. Provide electronic work papers supporting calculation of the class load factors in Statement L, "demand & energy – AED" tab, column E.

b. Describe the source and vintage of the data MDU used to calculate the class load factors.

c. Explain the process of determining the energy and demand loss factors (columns G & F) in Statement L, "demand & energy – AED" tab.

d. To the extent not provided in part (c), explain the higher loss percentage factor for demand.

PSC-026

Regarding: Allocation factor #3
Witness: Cardwell

a. You testify that factor #3 is derived by weighting factor #1 by 80 percent and factor #2 by 20 percent. Are the actual proportions 83.5 percent of factor #1 and 16.5% of factor #2?

b. Explain MDU's decision regarding the appropriate weightings for factors #1 and #2 in developing factor #3?

c. Are the capacity credits for MDU's wind resources listed in Statement L, "Factor 3 Wind" tab the capacity credits MISO attributes to those resources?

PSC-027

Regarding: Embedded cost study
Witness: Cardwell

Explain MDU's decision to apply the AED allocator (factor #2) to all production plant costs, except wind production plant, and particularly whether MDU considered subfunctionalizing its thermal production plant costs based on plant type and service (e.g., baseload vs peaking).

PSC-028

Regarding: Marginal cost study
Witness: Cardwell, pp. 11-12, Exhibit_(SJC-6)

a. Explain whether the PLEXOS model includes generation costs from resource additions planned during the 2017 – 2024 study period. For example, do the estimated marginal costs reflect the addition of a Combined Cycle unit in 2020 consistent with the base case least-cost plan identified in the 2015 IRP?

b. Explain whether the PLEXOS model includes generation costs associated with the carbon dioxide emissions tax modeled in the 2015 IRP.

c. Provide the energy related marginal costs including the carbon dioxide emissions tax modeled in the 2015 IRP, to the extent those costs are not included in Exhibit_(SJC-6).

d. Provide work papers showing the total generation related marginal energy and capacity costs allocated to customer classes.

PSC-029

Regarding: Marginal energy costs
Witness: Cardwell

a. Please provide all information which was input into the PLEXOS model to forecast marginal energy costs, including assumptions about Montana's retail load, estimates of future fuel prices, and characteristics of existing generation units and power contracts.

b. Please provide the full output produced from the PLEXOS model in electronic format.

c. If not provided in part b to this question, please provide the capacity factor for each of MDU's generation units as indicated in the PLEXOS model.

PSC-030

Regarding: Marginal capacity costs
Witness: Cardwell

a. In MDU's 2015 IRP, the future resource plan (Vol. 1, p. 54) states MDU will meet short term capacity deficits via the MISO capacity auction or through bi-lateral capacity PPA's. Please explain why MDU has used an 88-MW simple cycle combustion turbine to estimate marginal capacity costs in its marginal cost of service study instead of acquiring capacity through the MISO capacity market or through a PPA.

b. Considering the relative uncertainty surrounding the load that MDU will be serving in the Bakken, please discuss the positive and negative aspects of purchasing short-term capacity from the MISO capacity market versus investing in a long-term capacity resource such as an 88-MW simple cycle turbine.

c. What is MDU's projected marginal cost of capacity purchased in the MISO capacity market?

PSC-031

Regarding: Environmental Cost Recovery Rider – Rate 98
Witness: Aberle

a. Define an environmental mandate as referenced in the Applicability section of Rate 98.

b. If MDU has an authorized environmental cost recover rider in any of its other jurisdictions, provide the approved tariff schedule(s).

c. Is there a cap on costs that could be included in the ECRR, as proposed?

d. Would the adoption of the ECRR, as proposed, imply pre-approval of the prudence of costs included in the ECRR? If not, how does MDU propose the Commission vet the prudence or reasonableness of the costs?

e. Under a scenario where the Commission approved the ECRR as MDU has proposed and later found the costs included in the ECRR imprudent, how would MDU return the overcharges to customers?

PSC-032

Regarding: Transmission Cost Recovery Rider
Witness: Aberle

a. If MDU has an authorized transmission cost recovery rider (TCRR) in any of its other jurisdictions, provide the approved tariff schedule(s).

b. Is there a cap on the costs that could be included in the TCRR, as proposed?

c. Would the adoption of the TCRR, as proposed, imply pre-approval of the prudence of costs included in the TCRR? If not, how does MDU propose the Commission vet the prudence or reasonableness of the costs?

d. Under a scenario where the Commission approved the TCRR as MDU has proposed and later found costs included in the TCRR imprudent, how would MDU return the overcharges to customers?