Montana Public Service Commission

July 22, 2016

Mr. Joe Schwartzenberger
Regulatory Affairs Department
NorthWestern Energy
11 East Park
Butte, MT 59701

RE: Data Requests in Docket D2016.5.39

Dear Mr. Schwartzenberger:

Enclosed please find Data Requests PSC-001 through PSC-020 of the Montana Public Service Commission to NorthWestern Energy in the above-referenced Docket. Please provide a response by August 5, 2016. If you have any questions, please contact me at (406) 444-6191.

Sincerely,

Neil Templeton
Regulatory Division
Montana Public Service Commission

Enclosure

1701 Prospect Avenue • P.O. Box 202601 • Helena, Montana 59620-2601
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Service Date: July 22, 2016

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

IN THE MATTER OF NorthWestern Energy's Application for Interim and Final Approval of Revised Tariff No. QF-1, Qualifying Facility Power Purchase	))))	REGULATORY DIVISION DOCKET NO. D2016.5.39

DATA REQUESTS PSC-001 THROUGH PSC-020 OF THE MONTANA PUBLIC SERVICE COMMISSION TO NORTHWESTERN ENERGY

PSC-001

Regarding: Electronic Files
Witnesses: All

a. Please provide Excel-readable files of all Figures, Tables, avoided cost calculations, and ancillary information included in the application, with all calculations traceable.

b. Please provide Excel-readable files of all Figures, Tables, and cost calculations used in the 2015 Plan, with all calculations traceable.

c. Please provide Excel-readable monthly summaries of all PowerSimm input and output files related to this proceeding and the 2015 Plan.

PSC-002

Regarding: Suspended Rate Identifications
Witness: Hines

Please identify the project name, location, and developer and/or owner of each QF that NorthWestern believes has a right to the suspended QF-1 Option 1(a) rate pursuant to the Commission's *Notice of Commission Action* of June 16, 2016.

PSC-003

Regarding: Contract Negotiations
Witness: Hines

Please describe any attempts by NorthWestern to enter into negotiations with the QFs that NorthWestern believes cannot contract at QF-1 Option 1 rate due to the June 16, 2016 *Notice of Commission Action* suspending the availability of the standard-offer rate for certain QFs.

PSC-004

Regarding: Interconnection Agreements
Witness: Unknown

Please refer to affidavit of Mr. Casey (p. 5) in FLS's Motion for Rehearing.

a. Please confirm or deny with explanation whether NorthWestern's Transmission Department failed to provide an executable interconnection agreement within a required five business days of when the customer indicated that they would move forward with the interconnection agreement following the facilities study.

b. If confirmed, please identify each interconnection customer who requested an executable interconnection agreement, for whom NorthWestern did not provide one. Please explain when that customer was, in the end, provided such a document.

c. Please provide any notifications that NorthWestern provided any customers who were not provided executable interconnection agreements within five days.

d. Did the notification that NorthWestern made to any interconnection customers who requested an executable interconnection agreement, but did not receive one within five business days, include an explanation of the reason for the failure to meet the deadline and an estimated time by which NorthWestern would complete the procedure?

PSC-005

Regarding: Interconnection Agreements and PPAs
Witness: Hines

a. Please provide the name of the project and date the interconnection agreement was signed for the six fully executed interconnection agreements you reference at 7:17-18.

b. Please provide project name and execution date for the five executed purchased power agreements you reference on lines 7:18-19.

c. Has NorthWestern executed any additional interconnection agreements with QFs since you submitted testimony in this docket? If so, please provide details for each executed interconnection agreement.

d. Has NorthWestern executed any additional purchase power agreements with QFs since you submitted testimony in this docket? If so, please provide details for each executed purchase power agreement.

PSC-006

Regarding: OATT Responsibility Identification
Witness: Unknown

Please identify the employees of NorthWestern who are responsible for compliance with Section 3.5.7 (and any other sections related to the FLS allegations) of Attachment N of NWMT's Open Access Transmission Tariff.

PSC-007

Regarding: Correspondence with FLS
Witness: Mueller

Please confirm or deny with explanation that you asserted to an interconnection customer that a Notice of Commission Action issued by this Commission allows you to deny an interconnection agreement. If confirmed please provide for the record copies of written or electronic communications including this assertion.

PSC-008

Regarding: Contract Length and Reopeners
Witness: Hines

a. Please affirm if NorthWestern supports a maximum contract length of 25 years. If not, please describe and support an alternative.

b. Please describe NorthWestern's position on contract reopeners. If NorthWestern supports reopeners, please describe its preferred reopening trigger events.

c. Please state NorthWestern's position on annual updates to tariffed avoided cost rates, based on a Commission-specified procedure set in a proceeding such as this.

PSC-009

Regarding: Carbon Costs
Witness: Hines

Would NorthWestern support the elimination of a without-carbon alternative from the tariff? Please explain why or why not.

PSC-010

Regarding: Exhibit_JBB-1
Witness: Bushnell

a. Please provide an avoided cost calculation using the blended market-combined cycle method approved in D2012.1.3, modified as follows:

   i. Begin the forecast in 2016, using a 308 MW CCCT installed in 2025 as anticipated in the 2015 Plan;
   ii. calculate costs with and without the 2015 Plan market carbon adder and CCCT emissions costs; and
   iii. use anticipated CCCT production rather than production at 90% of nameplate capacity.

b. Please use the generation output information for the three projects contained in the tables on the bottom of page 4 of your direct testimony to calculate an all-in rate for the projects under the avoided cost method requested in part (a) to this question.

c. Please add a rate which is specific to solar projects using the same method that is currently used to calculate the Option 1(c) rate, with the assumption that the capacity value of a solar project is 7.8%.

d. Please provide Excel copies of supporting workpapers with links intact.

PSC-011

Regarding: Market Prices
Witness: Hansen

a. Please describe in detail the methods and logic supporting all market price streams used to generate your estimates, including any differences between market hub prices and Montana purchase and sale prices.

b. If not already provided, please provide all natural gas and electricity market forecasts used as PowerSimm inputs in in this application and NorthWestern's 2015 Plan.

c. For each of the last five years, please provide monthly average day-ahead AECO wholesale natural gas index prices, monthly average day-ahead Mid-C on-peak and

off-peak wholesale electricity index prices; and NorthWestern's monthly weighted average actual day-ahead on-peak and off-peak wholesale electricity purchase prices.

PSC-012

Regarding: Portfolio Net Purchase and Sale Positions
Witness: Hansen

a. When NorthWestern's portfolio is long, and the variable cost of the marginal resource is less than the market price, does NorthWestern reduce generation of the marginal resource or sell the excess power into the market to take advantage of the price differential between that of the marginal resource and the market price?

b. Please provide a table which shows the number of hours the wind, solar, and hydro/other projects which you modeled the energy price for fell into each of the three categories contained in the table on page LPH-6 (Short, Long-1, and Long-2).

PSC-013

Regarding: Avoided Cost Calculation
Witness: Hansen

For the wind, solar, and hydro/other resources, please calculate avoided costs using market sale price as the value of production under all long conditions, and market purchase price when short. Please calculate with and without a carbon adder.

PSC-014

Regarding: PowerSimm Modeling and Resource Displacement
Witness: Hansen

At 5:12-16 you testify that the base portfolio is the Economically Optimal Portfolio (EOP) adjusted to maintain RPS compliance for 25 years.

a. Please confirm or deny, with explanation, that the PowerSimm model did not allow the QF resources to displace or postpone development of planned acquisitions in the EOP, including the renewable resources forced into the model.

b. If confirmed, please explain how the chosen model allows for the estimation of avoided long-run energy related capital costs.

c. If denied, please describe how the avoided cost savings of resource displacement or postponement is captured in NorthWestern's static "net purchase or sale position" analysis.

d. Please confirm or deny, with explanation, that the PowerSimm package available to NorthWestern is capable of capacity expansion differential revenue requirement analysis, with complete opportunity for the modeled resource to optimally displace or postpone development of other avoidable resources.

e. If confirmed, please explain why NorthWestern is not providing this analysis as an alternative method to estimate avoided costs.

PSC-015

Regarding: Modeled Generation
Witness: Bushnell

a. Please provide the generation output for the 3 MW solar project used to calculate the rates contained in the tables at the bottom of page JBB-4.

b. Please provide the generation output for the 3 MW wind project used to calculate the rates contained in the tables at the bottom page JBB-4. Please explain how NorthWestern estimated the output for the 3 MW solar wind project.

c. Please describe and provide the historical production of small hydroelectric facilities referred to at 5:11-12.

PSC-016

Regarding: Exceedance Model
Witness: Bushnell

If possible, please provide examples where the exceedance model has been used by regulating bodies to establish capacity contribution. In each case, describe the parameter values employed.

PSC-017

Regarding: Exceedance Model
Witness: Bushnell

a. Please provide the dates on which NorthWestern experienced the highest 10% of on-peak hours over the previous 10 years.

b. Please provide the measured capacity for all NorthWestern-owned resources over the previous 5 years using the definition of measured capacity in NorthWestern's proposed QF-1 tariff.

c. Why was 10% selected as the level for the number of on-peak load hours that would be used to determine a QF capacity payment?

d. Please provide a sensitivity analysis to estimate the change to capacity contribution of the selected resources given changes to the model parameters of exceedance level and top percentage of On-Peak load hours. For instance, changing exceedance level to 80% and 90%, and percent load hours to 5%, 15%, and 20%.

PSC-018

Regarding: Exceedance Model
Witness: Bushnell

a. Using your proposed exceedance method, please provide aggregate capacity contribution (MW and percent of nameplate capacity) of all owned and contracted wind facilities in NorthWestern's portfolio.

b. Regarding your testimony on13:18-21, if not included in the response to prior data requests, please provide the work papers supporting the calculation of the capacity contributions of wind, solar and hydroelectric resources.

c. Please provide NorthWestern's load duration curves, with and without DSM, for 2020, 2025, and 2030 based on the 2015 Plan retail load forecasts.

d. Please clarify whether the highest 10% of on-peak load hours equates to the highest 2.3% of all load hours. If not, please explain why.

PSC-019

Regarding: Wind integration tariff
Witness: Bushnell

a. Please explain why NorthWestern is not proposing to update its Wind Integration tariff (WI-1 tariff) in this filing.

b. NorthWestern's 2015 Plan modeled the hydro facilities as if they would provide up to 50% of the regulation requirement for NorthWestern's current portfolio, which reduced the cost of regulation for NorthWestern by about 50% (*See* NorthWestern 2015 Plan, Volume 1, p. 11-13). Would it be appropriate to update the WI-1 tariff by reducing the integration charge by 50%? If not, please explain why not.

c. Please provide an updated WI-1 tariff using current cost information and explain how the integration charge is calculated in the proposed WI-1 tariff.

d. How does NorthWestern intend to manage the integration costs necessary to integrate other intermittent resources, such as solar generators?

PSC-020

Regarding: Contingency reserve tariff
Witness: Bushnell

a. Please explain why NorthWestern is not proposing to update its contingency reserve tariff (CR-1 tariff) in this filing.

b. Provide an updated CR-1 tariff using current cost information and contingency reserve requirements and explain how the contingency reserve charge is calculated in the proposed CR-1 tariff.