

Montana Public Service Commission



Brad Johnson - Chairman
Travis Kavulla - Vice Chairman
Kirk Bushman - Commissioner
Roger Koopman - Commissioner
Bob Lake - Commissioner

October 28, 2016

Jenny K. Harbine
Earthjustice
313 East Main Street
Bozeman, MT 59715

RE: Data Requests in Docket D2016.5.39

Dear Ms. Harbine:

Enclosed please find Data Requests PSC-028 through PSC-035 of the Montana Public Service Commission to Vote Solar and the Montana Environmental Information Center (MEIC) in the above-referenced Docket. Please provide a response by November 14, 2016. If you have any questions, please contact me at (406) 444-6191.

Sincerely,


Neil Templeton
Regulatory Division
Montana Public Service Commission

Enclosure

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

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

**DATA REQUESTS PSC-028 THROUGH PSC-035 OF THE MONTANA PUBLIC
SERVICE COMMISSION TO VOTE SOLAR AND MEIC**

PSC-028

Regarding: Electronic Files
Witness: Beach

Please provide Excel-readable files of all Exhibits, Figures, Tables, avoided cost calculations, and ancillary information, with all calculations traceable.

PSC-029

Regarding: Methods for Establishing Capacity Contribution
Witness: Beach

NorthWestern asserts that it is basing its choice of an 85% exceedance level in part on the 90% availability factor of a frame CT. *Bushnell Prefiled Direct Testimony* 11:1-5. At 22:14-16 you refer to a NERC report, *Accommodating High Levels of Variable Generation*, which notes that many control area operators assess the capacity contribution of solar resources based on their average capacity factor over a set of on-peak hours.

- a. Please compare the merits of using an exceedance, or probable minimum output method to establish capacity contribution versus using an average capacity, or probable output method.
- b. Please confirm, or deny with explanation that the use of an 80 MW CT with 90% availability to establish capacity costs implicitly recognizes the exceedance method, in that the CT is expected to be available to provide at least 80 MW of output in 90% of the hours under consideration.
- c. At 22:19-21 you state that the average capacity factor over NorthWestern's top 10% of on-peak load hours is about 51% of nameplate. Please confirm, or deny with

explanation that applying this result to the table shown on p.11 of Bushnell's prefiled direct testimony indicates that an output of at least 1.5 MW is achieved in fewer than 8% of the hours under review, and that this implies the probability the facility will achieve at least 51% of nameplate output in similar future hours is less than 8%.

- d. If the Commission determined that the exceedance method will be used to establish capacity contribution, what would be your proposed exceedance threshold?
- e. At 26:5-7 you state that 60% of exceedance over the top 10% of on-peak hours provides an output equal to 39% of nameplate. Please provide Excel worksheets to support this calculation.

PSC-030

Regarding: Valuing QF-1 Power under Long Conditions

Witness: Beach

- a. Please confirm, or deny with explanation that pricing QF power at zero during forecasted Long-2 conditions is logically equivalent to curtailing without compensation under Long-2 conditions.
- b. Please confirm, or deny with explanation that NorthWestern is obliged to preserve consumer indifference with respect to the procurement of QF power, or power from any other source, including its owned or proposed resources.
- c. Please confirm, or deny with explanation, that NorthWestern customers are indifferent between these choices: 1) Purchasing QF power at market price for immediate sale at market price (assuming zero transaction costs); or 2) No purchase of QF power.
- d. Please confirm, or deny with explanation, that NorthWestern customers are not indifferent between these choices: 1) Purchasing QF power at market price for immediate sale at market price (assuming non-zero transaction costs); or 2) No purchase of QF power.

PSC-031

Regarding: Valuing QF-1 Power under Long Conditions

Witness: Beach

- a. Please confirm, or deny with explanation that NorthWestern customers incur brokering costs and market price risk associated with buying and selling QF power under long conditions.
- b. Please confirm, or deny with explanation that Vote Solar/MEIC would support the pricing of QF-1 power under long conditions at projected market prices, less a deduction representing the fair value of, at least, NorthWestern's power brokering services and market price risk.

- c. If confirmed at (b), please provide and support an estimate of a reasonable deduction to market to compensate NorthWestern customers for expected cost and risk.

PSC-032

Regarding: Avoided Transmission Capacity Costs
Witness: Beach

Please provide Excel worksheets supporting your calculation of avoided transmission capacity costs equal to 49% of nameplate at 36:7-8.

PSC-033

Regarding: Annual Changes to QF-1 Rates
Witness: Beach

Please describe the Vote Solar/MEIC position on annual updates to QF-1 Tariff rates based upon changes in price indices and other factors in the approved avoided cost calculation.

PSC-034

Regarding: Levelized Costs
Witness: Beach

Please describe the Vote Solar/MEIC position on the use of levelized costs to set standard rates in the QF-1 Tariff.

PSC-035

Regarding: Exceedance Parameters
Witness: Beach

At 23:7-24:3 you provide examples of varied exceedance parameters used by other entities to determine capacity contribution.

- a. Please provide theoretical support, if available, to justify the choice of a 60% or 70% exceedance level rather than 85%.
- b. Please provide theoretical guidance, if available, to assist in selecting the set of load hours to be observed.