

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

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

**DATA RESPONSES OF THE MONTANA CONSUMER COUNSEL
TO THE MONTANA PUBLIC SERVICE COMMISSION**

PSC-042

Regarding: Valuing QF-1 Power under Long Conditions
Witness: Stamatson

At 8:8-10 you state: "When a QF puts energy onto NorthWestern's system, the Company must take it. In order to accommodate that energy, NorthWestern has to back down its marginal generating unit."

- a. Please confirm, or deny with explanation that NorthWestern will not back down its marginal generating unit to accommodate QF energy under Long 1 conditions, but will sell the energy at market to capture the difference between operating cost and market for customer benefit.
- b. Please confirm, or deny with explanation that operating the marginal unit for sale at market under Long 1 conditions is generally prudent, and that if NorthWestern failed to pursue opportunity revenues it would risk a finding of imprudence.
- c. Please confirm, or deny with explanation, that when NorthWestern seeks preapproval for a new energy resource because its extant resources are not sufficient, the cost prudence of the proposed resource will not be evaluated in comparison to avoided operating costs of resources already under NorthWestern's control, but rather in comparison to the cost of alternative resources such as market purchases.
- d. Please confirm, or deny with explanation that the Commission should seek consistency over time and across resources, including QFs, in its valuation of the cost prudence of resource acquisitions.

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Responses:

- a. NorthWestern either has to back down its economically dispatched marginal generating unit to accommodate the QF's energy or sell the QF's energy into the market. This decision would depend on several factors; the cost of the QF's energy relative to the variable cost to run its marginal unit, the availability of transmission to wheel the energy to market, and the transaction costs involved. It is not definitive the market price will be greater than the cost of the QF's energy plus transaction cost and NorthWestern will be able to secure transmission capacity to send that energy to market. If NorthWestern is marketing the energy a QF provides, it is engaging as power marketer on behalf of the QF, with all the associated risks of such an activity borne by consumers.
- b. Confirm. It is generally prudent to continue operating the marginal unit under the Long 1 condition because that unit is economically dispatched. It would be generally imprudent for NorthWestern to fail to pursue opportunity revenues with its own resources, that is resources acquired in accordance with the protections afforded to ratepayers under Montana law.
- c. Confirm. If NorthWestern is seeking preapproval for a new resource to serve load, that resource either has to be consistent with the Company's Electricity Supply Resource Procurement Plan and the processes used to derive it or it must be identified as an opportunity resource. Comparing the cost of that resource to the cost of an alternative resource such as market purchases is one way to evaluate it. It would not be evaluated based on the Company's avoided operating cost of current resources under its control. It would be evaluated based on the cost of possible alternative supply sources though production cost model runs that result in a resource section that minimizes the net present value of revenue requirement.
- d. Confirm. Consistency over time and across resources in the valuation of cost prudence of resource acquisitions is desirable as all resource acquisitions should aim to achieve the lowest possible cost to ratepayers. Evaluation of a utility resource should be done using the most up-to-date information. The issue with small QFs is that this is usually not possible as the avoided cost value that small QFs receive is set administratively with prolonged intervals between updates, resulting in stale values of avoided cost.

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PSC-043

Regarding: Valuing QF-1 Power under Long Conditions

Witness: Stamatson

- 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.
- e. Please confirm, or deny with explanation, that NorthWestern customers are not indifferent between these choices: 1) Purchasing QF power at less than market price with immediate sale at market for customer profit; or 2) No purchase of QF power.

Responses:

- a. Deny. During Long-2 conditions NorthWestern does not need additional power to serve load and cannot back down further any of its dispatchable resources to accommodate the QF's output. Nonetheless, it must accept the energy produced by QFs. NorthWestern is avoiding nothing during this condition so the value of a QF's output to ratepayers is zero, and zero is the value that should be averaged into the levelized QF rate. QF rates should be set to reflect the value of QF power across all hours when the utility is both short and long. Assigning a zero value to

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unnneeded power is different than curtailment, which is usually not an option with QFs.

- b. Confirm. One of the requirements of PURPA is that consumers remain indifferent between supply sources. This requires that a QF on NorthWestern's system must not be paid more than the Company's avoided cost.
- c. Confirm. If transaction cost were zero and NorthWestern could immediately sell a QF's output for what it paid, consumers would be indifferent. However, if there are transaction costs, or if there is a risk that NWE might not be able to immediately sell at the same price it paid, then NorthWestern customers would not be indifferent.
- d. Confirm. Consumers would be taking a loss in the amount of the transaction costs in this situation and they would prefer to not purchase QF power. Transaction costs are a risk of market participation and this is one reason why NorthWestern should not be required to market power on behalf of a QF. All risk from such behavior would be borne by consumers.
- e. Confirm. Consumers would benefit in such a situation if NorthWestern was able to make margin on the sale of QF power. However, this implies the margin must be greater than transaction costs and a market risk premium.

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PSC-044

Regarding: Valuing QF-1 Power under Long Conditions

Witness: Stamatson

- 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 MCC would support the pricing of QF power under long conditions at projected market prices, less 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.

Responses:

- a. Confirm. There are both brokering costs (as well as other transaction costs) and market price risk associated with marketing power under long conditions.
- b. Deny. Administratively determining the fair value of power brokering services and market price risk would be very difficult and contentious, and as a result, impractical for small QFs. Also, with respect to long-term market forecasts, there is too much market price risk, especially when those forecasts extend beyond the forward strip.
- c. See answer in part (b).

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PSC-045

Regarding: Modeling of Carbon Prices in PowerSimm

Witness: Stamatson

- a. Please confirm, or deny with explanation that a triangular distribution is an appropriate probability distribution for the purpose of modeling carbon risk.
- b. If confirmed, please confirm or deny with explanation that you agree with the parameter specification of NorthWestern's triangular distribution.
- c. If you support the use of the triangular distribution but do not support the specified parameters, please specify supportable parameters.
- d. If you do not support the use of the triangular distribution but would support the use of an alternative probability distribution, please specify a supportable alternative with supportable parameters.
- e. At 11:17-12:3 you refer to NorthWestern's proposed carbon prices as assumptions rather than forecasts, due to the absence of historical carbon price data. Does the absence of price history preclude the specification of a reasonable probability distribution for carbon prices?

Responses:

- a. Confirm, with a caveat. A triangular distribution is only an appropriate distribution to use when you have no historical information about whatever you are modelling. In the case of NorthWestern, I believe it is appropriate to use given the absence of historical carbon prices and the Company's desire to inject stochastic shocks regarding carbon prices into PowerSimm to determine how the model performs under that pressure.
- b. I believe the parameters NorthWestern has specified give an adequate range of prices for the sole purpose of testing the model's performance under stress. I make no assertions as to whether probabilities of the minimum, mean, and maximum values of carbon in NorthWestern's triangular distribution reflect a likely future reality, especially given the results of the recent Presidential election and its probable impact on the implementation of the Clean Power Plan.

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- c. See answer in part (b).
- d. I would support an alternative distribution if and when carbon prices in Montana are actually realized. Whatever distribution I would support would depend on the historical carbon price series.
- e. It does preclude any reasonable distribution beside a triangular distribution. However, the parameters of the triangular distribution are inescapably arbitrary and it remains useful only for testing the model results.

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Regarding: Annual Changes to QF-1 Rates

Witness: Stamatson

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

Response:

The MCC believes that annual updates based on changes in price indexes are preferable to the current practice of fixed, levelized 25-year rates if the avoided cost methodology allows it to be feasible, assuming an opportunity for review and comment is provided.

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PSC-047

Regarding: Levelized Costs

Witness: Stamatson

Please describe the MCC position on the use of levelized costs to set standard rates in the QF-1 Tariff.

Response:

Levelization does not contribute to the justness and reasonableness of QF rates to electric consumers. Historically, the use of levelized rates represented a means to accelerate QF project cash flows to developers, while making payments in the later years of a QF contract less expensive than they would have been without levelization. However, the risk that a QF may not perform is greater during the later years of its contract. Also, the risks inherent in utility production cost forecasts are greater during the later years of a contract. The use of levelization both masks and exacerbates these problems. It would be far preferable for the Commission to shorten the length of contracts to 5-7 years, which is a term where utility production cost forecasts could be deemed more reliable.