

September 9, 2016

Mr. Will Rosquist  
Administrator, Regulatory Division  
Montana Public Service Commission  
1701 Prospect Avenue  
PO Box 2022601  
Helena, Montana 59620-2601

**Re: Docket No. D2016.5.39 QF-1 Filing**  
**PSC Set 1 Data Requests (001-020) – Updated PSC-010**

Dear Mr. Rosquist:

Enclosed for filing is a copy of NorthWestern Energy's updated response to PSC-010 in Set 1 Data Requests in Docket No. D2016.5.39. It has been hand delivered to the Montana Public Service Commission and the Montana Consumer Counsel this date. It has also been mailed to the remainder of the service list, e-filed on the PSC website, and emailed to counsel of record.

Should you have questions please contact Joe Schwartzberger at (406) 497-3362.

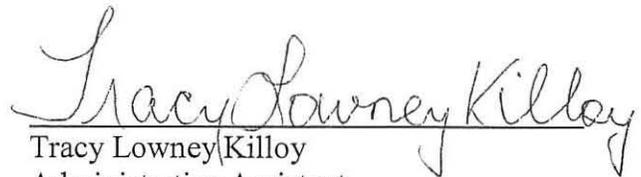
Sincerely,

Tracy Lowney Killoy  
Administrative Assistant

**CERTIFICATE OF SERVICE**

I hereby certify that a copy of NorthWestern Energy's updated response to PSC-010 in PSC Set 1 Data Requests (001-020) in Docket No. D2016.5.39 has been hand delivered to the Montana Public Service Commission and the Montana Consumer Counsel this date. It has also been mailed to the remainder of the service list, e-filed on the PSC website, and emailed to counsel of record.

Date: September 9, 2016



Tracy Lowney Killoy  
Administrative Assistant  
Regulatory Affairs

**Docket Service List**  
**Docket No. D2016.5.39**

**Will Rosquist**  
**Public Service Commission**  
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**Helena MT 59620-2601**

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**Mike J Uda**  
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**7 West Sixth Avenue**  
**Power Block West, Suite 4H**  
**Helena MT 59601**

**NorthWestern Energy**  
**Docket No. D2016.5.39**  
**Application for Approval of Avoided Cost Tariff Schedule QF-1**

**Montana Public Service Commission**  
**Set 1 (001-020)**

Data Requests received July 22, 2016

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.

**RESPONSE:**

a.-d. See the folder labeled PSC-010 on the CD attached to the response to Data Request PSC-001b. The resulting rates are shown below:

Current Tariffed Rates		
Resource Type	Without Carbon	With Carbon
Non-Wind <sup>1</sup>	\$0.06235	NA
Wind <sup>1</sup>	\$0.05439	NA
Non-Wind (Solar) <sup>2</sup>	\$0.06609	NA

PSC-010a Construct		
Resource Type	Without Carbon	With Carbon
Non-Wind <sup>1</sup>	\$0.04521	\$0.04708
Wind <sup>1</sup>	\$0.03515	\$0.03702
Solar <sup>2</sup>	\$0.03828	\$0.04015

<sup>1</sup> Annual average rate

<sup>2</sup> Modeled production

**NorthWestern Energy**  
**Docket No. D2016.5.39**  
**Application for Approval of Avoided Cost Tariff Schedule QF-1**

**Montana Public Service Commission**  
**Set 1 (001-020)**

Data Requests received July 22, 2016

UPDATED RESPONSE (September 9, 2016):

- a.- d. Based upon discussion with PSC Staff, NorthWestern updated this response to provide the avoided cost calculation requested in the original data request updated to include the thermal generation carbon penalty from the 2015 Plan.

See the folder labeled “Updated PSC-010” on the attached CD. The resulting rates are shown below:

**Comparison of Average Annual Rates - Amended**

Current Tariffed Rates		
Resource Type	Without Carbon	With Carbon
Non-Wind <sup>1</sup>	\$0.06235	NA
Wind <sup>1</sup>	\$0.05439	NA
Non-Wind (Solar) <sup>2</sup>	\$0.06609	NA

PSC-010a Construct (Amended)		
Resource Type	Without Carbon	With Carbon
Non-Wind <sup>1</sup>	\$0.04521	\$0.05230
Wind <sup>1</sup>	\$0.03515	\$0.04224
Solar <sup>2</sup>	\$0.03828	\$0.04537

<sup>1</sup> Annual average rate

<sup>2</sup> Modeled production