



DOCKET NO. D2015.8.64

QF Petition from Greycliff Wind Prime, LLC
to Set Terms and Conditions

Before the Public Service Commission
of the State of Montana

**NORTHWESTERN ENERGY'S
SURREBUTTAL TESTIMONY**

May 2016

7
8
9 **PREFILED SURREBUTTAL TESTIMONY**
10 **OF BLEAU J. LAFAVE**
11 **ON BEHALF OF NORTHWESTERN ENERGY**
12

13 **TABLE OF CONTENTS**

14	<u>Description</u>	<u>Starting Page No.</u>
15	Witness Information	2
16	Purpose of Testimony	2
17	Greycliff's Avoided Cost Rate	2

18
19

1 **Witness Information**

2 **Q. Please state your name and business address.**

3 **A.** My name is Bleau J. LaFave. My business address is 3010 West 69th
4 Street, Sioux Falls, South Dakota 57108.

5
6 **Q. Are you the same Bleau J. LaFave who previously filed response**
7 **testimonies in this docket?**

8 **A.** Yes, I am.
9

10 **Purpose of Testimony**

11 **Q. What is the purpose of this testimony?**

12 **A.** The purpose of this testimony is to respond to new issues raised in the
13 Prefiled Rebuttal Testimony of Roger Schiffman of Power Markets
14 Research Group (“PMRG”) on behalf of Greycliff Wind Prime, LLC
15 (“Greycliff”). This includes but is not limited to why Mr. Schiffman’s
16 proposed avoided cost is not appropriate and is incorrect.
17

18 **Greycliff’s Avoided Cost Rate**

19 **Q. What avoided cost rates has Mr. Schiffman proposed in his rebuttal**
20 **testimony?**

21 **A.** Mr. Schiffman proposed two avoided cost rates. The first is a levelized
22 avoided cost of \$53.39 per megawatt-hour (“MWh”). In his testimony on
23 page 41, he indicates that this rate is reflective of the Northwest Power

1 and Conservation Council's ("NPCC") medium level electricity price
2 forecast. Alternatively, on page 42 he proposes a levelized avoided cost
3 of \$80.82 per MWh, which uses the Energy Information Administration's
4 2015 Annual Energy Outlook natural gas price forecast.

5
6 **Q. Did Greycliff propose these two avoided costs rates in its initial**
7 **petition filed with the Montana Public Service Commission**
8 **("Commission")?**

9 **A.** No. Originally, Greycliff proposed an avoided cost rate of \$53.85/MWh.
10 However, this rate was not based on NorthWestern Energy's
11 ("NorthWestern") current portfolio needs or resources nor was it a result of
12 any specific modeling or calculation. Only after NorthWestern filed its
13 response testimonies and the parties participated in a period of
14 negotiations did Greycliff propose these alternative avoided cost rates.

15
16 **Q. Do you believe the new avoided cost rates presented on pages 41**
17 **and 42 of Mr. Schiffman's rebuttal testimony and stated above are**
18 **reasonable and appropriate for NorthWestern's customers?**

19 **A.** No. Mr. Schiffman's proposed avoided cost rates are inconsistent with the
20 regulations implementing the Public Utilities Regulatory Policy Act of 1978
21 ("PURPA"). He also suggests that the Commission should ignore the
22 Federal Energy Regulatory Commission's ("FERC") Order No. 69 ("Order
23 69") when calculating avoided cost rates.

1 Additionally, the proposed rates are simply inflated market prices for every
2 MWh delivered by Greycliff to NorthWestern. They fail to consider
3 NorthWestern’s portfolio resources or needs. His estimates also do not
4 include a majority of the costs that NorthWestern customers would incur
5 by adding the project to the portfolio. NorthWestern provided the best
6 estimate of the costs that can be avoided by customers from purchasing
7 the power from this Qualifying Facility (“QF”).

8

9 **Q. Do you think retail sales in a high market hour or in a low load hour**
10 **should be included in the avoided costs as suggested by Mr.**
11 **Schiffman’s proposal that the Commission ignore the plain reading**
12 **of Order 69?**

13 **A.** No. Order 69 clearly states that a utility does not have to sell power
14 purchased from a QF that it does not need to the market to benefit the QF.
15 I believe PURPA correctly indicated that portfolios which serve customers
16 protect them from the risk of high market prices because of the dedicated
17 generation resources those portfolios contain. Including these market
18 conditions in the avoided cost would expose customers to high market
19 prices that they are not currently exposed to. The avoided costs cannot
20 exceed costs that can be avoided.

21

22 In low load hours when the energy cannot be used, the avoided cost of the
23 utility is zero. In an effort to reach a compromise with Greycliff, in this

1 case, NorthWestern included the value of market sales during these hours
2 to the benefit of the QF. However, because no costs can actually be
3 avoided, NorthWestern supports an avoided cost of zero in these hours in
4 order to be consistent with Order 69.

5
6 **Q. Why are Mr. Schiffman’s proposed avoided costs inconsistent with**
7 **PURPA regulations?**

8 **A.** As Mr. Schiffman points out on page 5 of his testimony, “FERC rules
9 implementing PURPA did not select a specific method for establishing the
10 avoided cost rate” Nevertheless, a utility’s avoided cost must be based
11 on the best estimate of actual costs that can be avoided by the utility from
12 purchasing energy and capacity from the QF. The most accurate estimate
13 must use and consider the utility’s supply portfolio as a baseline; then it
14 must consider the effect that a new project has on that portfolio.

15
16 Mr. Schiffman’s proposed avoided cost rates fail to consider either. In
17 response to Data Request NWE-022, Mr. Schiffman provides a response
18 to how his proposed avoided cost rates were derived. In this response, he
19 states that “PMRG developed the energy value of avoided cost projections
20 by applying forecast electric energy prices at Mid-C, to projected energy
21 production for the Greycliff project.” Mr. Schiffman’s response never
22 discusses NorthWestern’s portfolio needs. This is clear from review of the
23 work papers provided in response to Data Request NWE-022.

1 **Q. Mr. Schiffman's proposed avoided cost seems very simple when**
2 **compared to NorthWestern's avoided cost calculation which uses**
3 **the PowerSimm model to simulate future needs. Why is Mr.**
4 **Schiffman's simple approach inappropriate?**

5 **A.** Well, again, his simple calculation is inappropriate because it fails to
6 consider NorthWestern's portfolio needs. Mr. Schiffman criticizes
7 NorthWestern's use of the PowerSimm model arguing that it is not
8 transparent. Unlike Greycliff's proposed avoided cost rates, the
9 NorthWestern avoided cost model appropriately considers the portfolio
10 needs of the utility. It is an economic dispatch of the NorthWestern
11 portfolio with and without the Greycliff QF production. During any given
12 hour in the 25-year period, the energy purchased from the QF is either
13 displacing market purchases or portfolio resources, or there is nothing to
14 displace. This value of energy along with the value of capacity and the
15 deduction of costs yield the appropriate avoided costs of the utility. Mr.
16 Schiffman's criticisms are not well founded. Neither Mr. Schiffman, nor
17 any of the Greycliff associates, accepted the offer from NorthWestern to
18 work with Ascend Analytics to view the model and calculations. Yet,
19 NorthWestern did provide the inputs to and the outputs from the model,
20 which should have allowed Greycliff to understand PowerSimm's
21 simulations of market, load, and generation forecasting.

22

1 **Q. You also stated that Mr. Schiffman’s proposed avoided cost rates are**
2 **inappropriate because they fail to account for all costs that**
3 **customers would incur by having to purchase power from Greycliff.**
4 **Can you please explain what costs you were referring to in this**
5 **statement?**

6 **A.** One of the costs to which I was referring was the interconnection network
7 upgrade costs that would be attributable to the Greycliff project. As
8 explained in my Prefiled Supplemental Response Testimony filed in
9 January (“Supplemental Response Testimony”), Greycliff must pay \$4
10 million in interconnection upgrade costs for its project, and \$3.5 million of
11 these costs will be reimbursed to Greycliff. Once the costs are reimbursed
12 to Greycliff, the assets will be added to NorthWestern’s customer rate
13 base with the costs of the assets recovered over the life of the asset from
14 customers. These costs must be reflected in the avoided cost in order to
15 keep customers indifferent to the purchase of power from Greycliff.

16
17 **Q. Are there any other costs which you believe Mr. Schiffman**
18 **inappropriately excluded from his proposed avoided cost**
19 **calculation?**

20 **A.** Yes. Mr. Schiffman fails to include an adjustment for the fact that Greycliff
21 is an intermittent resource; the energy values he has proposed are for firm
22 resources. This is inappropriate because the QF is receiving a higher
23 price for energy that is delivered in real time. For this adjustment only,

1 NorthWestern used Powerdex or the Mid-C Historical Price Series to
2 evaluate the historic differences between firm day-ahead pricing and the
3 real-time pricing. This downward price adjustment to the firm day-ahead
4 forecast is necessary because Greycliff is incapable of delivering day-
5 ahead firm energy.

6
7 Also, Mr. Schiffman fails to appropriately adjust for regulation and
8 supplemental reserves as required under NorthWestern's transmission
9 tariff. He uses NorthWestern's Wind Integration and Contingency Reserve
10 Tariffs, Nos. WI-1 and CR-1, respectively, to calculate the proposed
11 adjustment for regulation and supplemental reserves, and these tariffs
12 only apply to QFs that are 3 MW or less in size. Furthermore, he fails to
13 adjust at all for spinning reserves.

14
15 As explained in my Prefiled Response Testimony filed in November 2015,
16 under Schedule Nos. 5 and 6 of NorthWestern's Open Access
17 Transmission Tariff, supplemental reserves are required when generation
18 is added to NorthWestern's Balancing Authority ("BA"). Since Greycliff is
19 unable to provide its own reserves, additional reserves must be acquired
20 to meet the BA requirements. These costs must be borne by the project,
21 not NorthWestern's customers in order to keep customers indifferent as
22 required by PURPA.

23

1 As noted in my Prefiled Revised Supplemental Response Testimony filed
2 in March 2016, the total supplemental reserves for the Greycliff project are
3 \$1.09/MWh. This amount must be deducted from the energy avoided cost
4 rate to be paid to the QF. It is inappropriate to rely on NorthWestern's
5 Contingency Reserve Tariff to calculate this adjustment for the Greycliff
6 project because, as mentioned above, that tariff schedule is only
7 applicable to QFs that are 3 MW or less as indicated in the tariff schedule.
8 My proposed calculation appropriately accounts for the larger nameplate
9 capacity of Greycliff. Reliance on NorthWestern's Wind Integration tariff
10 schedule is also inappropriate because it, too, is only applicable to
11 standard offer sized QF projects. The calculation of regulation plus
12 spinning reserves proposed in my testimony (\$0.52 + \$0.61) appropriately
13 accounts for the regulation needs of a facility the size of Greycliff.

14

15 **Q. Does this conclude your surrebuttal testimony?**

16 **A.** Yes, it does.

7
8
9 **PREFILED SURREBUTTAL TESTIMONY**
10 **OF LUKE P. HANSEN**
11 **ON BEHALF OF NORTHWESTERN ENERGY**
12

13 **TABLE OF CONTENTS**

<u>Description</u>	<u>Starting Page No.</u>
15 Witness Information	2
16 Purpose of Testimony	2
17 Greycliff's Proposed Avoided Cost	2

1 **Witness Information**

2 **Q. Please state your name and business address.**

3 **A.** My name is Luke P. Hansen, and my business address is 11 East Park
4 Street, Butte, Montana 59701.

5
6 **Q. Are you the same Luke P. Hansen that previously filed testimony in
7 this docket?**

8 **A.** Yes, I am.
9

10 **Purpose of Testimony**

11 **Q. What is the purpose of your testimony in this docket?**

12 **A.** The purpose of my testimony is to rebut the avoided cost rates proposed
13 by Greycliff Wind Prime, LLC (“Greycliff”) witness Roger Schiffman.
14

15 **Greycliff’s Proposed Avoided Cost**

16 **Q. What avoided cost rates has Greycliff proposed in its rebuttal
17 testimony?**

18 **A.** Greycliff has proposed two alternative avoided cost rates from its newly
19 hired expert, Mr. Schiffman. Please see the Prefiled Surrebuttal
20 Testimony of Bleau J. LaFave (“LaFave Surrebuttal Testimony”) for
21 specifics on these two rates.
22

1 **Q. Do you agree with the alternative avoided cost rates proposed by Mr.**
2 **Schiffman?**

3 **A.** No. In addition to the issues raised by the LaFave Surrebuttal Testimony,
4 I believe that these alternative avoided cost rates are inappropriate and
5 incorrect because of certain incorrect assumptions made when calculating
6 the rates, failure to properly model NorthWestern Energy's
7 ("NorthWestern") portfolio, and use of particular forecasts.

8
9 **Q. What assumptions did Mr. Schiffman make which you believe are**
10 **incorrect?**

11 **A.** In his rebuttal testimony at page 18, Mr. Schiffman incorrectly assumes
12 that NorthWestern is "almost always in a net purchase position." Because
13 of this assumption, Mr. Schiffman suggests that the proper calculation of
14 the avoided cost rate in this case should simply multiply Greycliff's
15 estimated production by a market forecast. This approach is wrong for two
16 reasons: One, this assumption fails to account for NorthWestern's supply
17 needs in any given hour, and two, the assumption is incorrect.

18
19 Exhibit__(LPH-1) _rev details Greycliff's estimated generation. This
20 exhibit details the production that occurs during times when
21 NorthWestern's portfolio is in a net purchase position and during times
22 when it is not. Through 2018-2021, 50.2% of Greycliff's estimated
23 production occurs during times when NorthWestern's portfolio is forecast

1 to not be in a net purchase position. Additionally, through the first ten
2 years (2018-2027), 40.5% of Greycliff's estimated production occurs
3 during a time that NorthWestern is not expected to be in a net purchase
4 position. These figures contradict the assertions and assumptions made
5 by Mr. Schiffman that NorthWestern is "almost always" in a net purchase
6 position. Instead, these figures show that NorthWestern is only expected
7 to be in a net purchase position approximately half of the first five years of
8 production and a little more than half of the time in the first ten years of
9 production.

10

11 **Q. Please elaborate on the issues you have with the method Mr.**
12 **Schiffman used to calculate the alternative avoided cost rates he**
13 **proposed in this case.**

14 **A.** As discussed in the LaFave Surrebuttal Testimony, Mr. Schiffman fails to
15 account for NorthWestern's supply portfolio in his calculation of the
16 alternative avoided cost rates. He claims in his testimony at page 17 that
17 his proposed rates are more appropriate than NorthWestern's because
18 NorthWestern "limited its use of the PowerSimm model only to estimate
19 whether its system would be in a net purchase or net sale position, on a
20 monthly basis, segmented by High Load (On-Peak) and Low Load (Off-
21 Peak) periods. NWE also used the PowerSimm model to develop long-
22 term market price projections at Mid-C." These statements are factually
23 incorrect.

1 As discussed in my Prefiled Response Testimony filed in November 2015,
2 NorthWestern simulated NorthWestern's supply portfolio including
3 Greycliff's production and without that production. This simulation
4 analyzed weather, load, renewable generation, forward prices, and
5 economic dispatch of NorthWestern's thermal generation units. This
6 simulation of each supply resource, either owned or contracted for,
7 aggregated to the entire portfolio level and compared against
8 NorthWestern's load determines if NorthWestern is in a long or short
9 position. The comparison of the simulated supply portfolios with and
10 without Greycliff, and the net position of these portfolios are the foundation
11 of a properly calculated avoided cost of energy. Additionally, the long-
12 term market price forecasts at Mid-C were inputs into the PowerSimm
13 model and were not outputs as suggested by Mr. Schiffman in his
14 testimony.

15

16 **Q. Finally, you noted that the alternative avoided cost calculations are**
17 **inappropriate because of the forecasts selected by Mr. Schiffman.**
18 **Please explain why the forecasts he used to calculate Greycliff's**
19 **proposed alternative avoided cost rates is inappropriate.**

20 **A.** First, Mr. Schiffman used the Northwest Power and Conservation
21 Council's ("NPCC") electric forecast to calculate the alternative avoided
22 cost rates proposed in his testimony. Use of this forecast for purposes of
23 calculating a NorthWestern-specific avoided cost rate is inappropriate.

1 First, the NPCC produces an electric forecast for the entire Columbia
2 River Basin. The Columbia River Basin covers Montana, Idaho,
3 Washington, and Oregon. For purposes of this docket, the customers
4 affected by the Greycliff production are located only in Montana and not
5 the entire Columbia River Basin.

6
7 While the NPCC forecast is a fundamental forecast, NPCC usually only
8 updates the forecast annually and it does not represent the most current
9 fundamental information available. Instead, NorthWestern's use of current
10 market prices, with an Energy Information Administration ("EIA")
11 escalation rate after July 2020, incorporates both the most current
12 fundamental information (as represented in the market prices) and future
13 supply and demand changes (as represented in by the EIA escalation
14 rate).

15
16 Additionally, Mr. Schiffman incorrectly states that NorthWestern based its
17 avoided cost analysis on power prices at Mid-C and therefore it is
18 appropriate to use the NPCC natural gas price forecast for purposes of
19 calculating the alterative avoided cost rates. While NorthWestern inputs
20 power prices from Mid-C and natural gas prices from Alberta Energy
21 Company ("AECO"), transmission and pipeline transportation charges are
22 included in PowerSimm in order to account for energy delivered to
23 Montana. These charges are included in the simulations and the avoided

1 cost calculations include these transmission and transportation charges to
2 determine the avoided cost of a Qualifying Facility providing power to an
3 electric utility in Montana. Thus, NorthWestern's avoided cost calculation
4 does not use straight Mid-C prices for purposes of calculating the avoided
5 cost rate in this case.

6
7 Second, Mr. Schiffman in his rebuttal testimony at page 28 recommends
8 using a natural gas forecast at Stanfield instead of using a natural gas
9 forecast from AECO because use of the AECO forecast "results in a
10 significant understatement of natural gas prices and also electricity prices
11 at Mid-C." First, like with the NPCC forecast, use of a natural gas forecast
12 at Stanfield is also inappropriate. NorthWestern should use a natural gas
13 forecast derived from AECO because NorthWestern operates in Montana
14 and its natural gas generators are located in Montana. The natural gas
15 used to fuel these generators is sourced from AECO. There is not a direct
16 pipeline route from Stanfield to Montana and thus it is not appropriate to
17 use a Stanfield price for avoided cost calculations in Montana.

18
19 Second, NorthWestern's use of AECO natural gas pricing instead of
20 Stanfield natural gas pricing has no effect on the electricity prices at Mid-C
21 or the avoided cost. Below are annual forward price strips for Mid-C,
22 AECO, and Stanfield from the January 15, 2016 market close. All of these
23 curves were developed using the same methodology used by

1 NorthWestern in this proceeding. The forward curve is used through July,
2 2020 and then escalated thereafter at the annual escalation rate from the
3 EIA 2015 Annual Energy Outlook (“AEO”). This escalation maintains the
4 fundamental relationship between electric and natural gas prices as
5 calculated through the market implied heat rates (electric price divided by
6 gas price) for both Mid-C/AECO and Mid-C/Stanfield as shown in the two
7 columns on the right.

	Mid-C Forward Curve	AECO Forward Curve	Stanfield Forward Curve	Mid-C / AECO Implied Heat Rate	Mid-C / Stanfield Implied Heat Rate
2018	\$ 25.27	\$ 2.19	\$ 2.77	11.5	9.1
2019	\$ 27.28	\$ 2.38	\$ 2.90	11.4	9.4
2020	\$ 28.84	\$ 2.52	\$ 3.03	11.4	9.5
2021	\$ 30.04	\$ 2.63	\$ 3.16	11.4	9.5
2022	\$ 31.29	\$ 2.73	\$ 3.29	11.4	9.5
2023	\$ 32.59	\$ 2.85	\$ 3.42	11.4	9.5
2024	\$ 33.94	\$ 2.97	\$ 3.57	11.4	9.5
2025	\$ 35.35	\$ 3.09	\$ 3.72	11.4	9.5
2026	\$ 36.82	\$ 3.22	\$ 3.87	11.4	9.5
2027	\$ 38.34	\$ 3.35	\$ 4.03	11.4	9.5
2028	\$ 39.94	\$ 3.49	\$ 4.20	11.4	9.5
2029	\$ 41.60	\$ 3.64	\$ 4.37	11.4	9.5
2030	\$ 43.32	\$ 3.79	\$ 4.55	11.4	9.5
2031	\$ 45.12	\$ 3.94	\$ 4.74	11.4	9.5
2032	\$ 46.99	\$ 4.11	\$ 4.94	11.4	9.5
2033	\$ 48.95	\$ 4.28	\$ 5.14	11.4	9.5
2034	\$ 50.98	\$ 4.46	\$ 5.36	11.4	9.5
2035	\$ 53.09	\$ 4.64	\$ 5.58	11.4	9.5
2036	\$ 55.30	\$ 4.83	\$ 5.81	11.4	9.5
2037	\$ 57.60	\$ 5.03	\$ 6.05	11.4	9.5
2038	\$ 59.99	\$ 5.24	\$ 6.30	11.4	9.5
2039	\$ 62.48	\$ 5.46	\$ 6.57	11.4	9.5
2040	\$ 65.07	\$ 5.69	\$ 6.84	11.4	9.5
2041	\$ 67.77	\$ 5.92	\$ 7.12	11.4	9.5
2042	\$ 70.59	\$ 6.17	\$ 7.42	11.4	9.5

1 The table below uses the same AECO and Stanfield prices from the table
2 above. The Mid-C forward curve in the table on the left is computed by
3 multiplying the AECO forward curve and the Mid-C/AECO implied heat

1 rate. After 2020, the AECO forward curve is multiplied by the Mid-
2 C/AECO implied heat rate from 2020.

3

4 The Mid-C forward curve on the right is developed by multiplying the
5 Stanfield forward curve and the Mid-C/Stanfield implied heat rate. After
6 2020, the Stanfield forward curve is multiplied by the Mid-C/Stanfield
7 implied heat rate from 2020. The column in the far right details the
8 variance in the Mid-C forward curve that was calculated using the AECO
9 forward curve and the Mid-C forward curve that was calculated using
10 Stanfield forward curve. As shown, there is no change in the Mid-C
11 forecast in using an AECO generated natural gas forecast instead of a
12 natural gas forecast at Stanfield.

13

	AECO Forward Curve	Mid-C / AECO Implied Heat Rate	Mid-C Forward Curve from AECO Implied Heat Rate		Stanfield Forward Curve	Mid-C / Stanfield Implied Heat Rate	Mid-C Forward Curve from Stanfield Implied Heat Rate	Variance in Mid-C Forecast from AECO Forecast to Stanfield Forecasts
2018	\$ 2.19	11.5	\$ 25.27		\$ 2.77	9.1	\$ 25.27	\$ -
2019	\$ 2.38	11.4	\$ 27.28		\$ 2.90	9.4	\$ 27.28	\$ -
2020	\$ 2.52	11.4	\$ 28.84		\$ 3.03	9.5	\$ 28.84	\$ -
2021	\$ 2.63		\$ 30.04		\$ 3.16		\$ 30.04	\$ -
2022	\$ 2.73		\$ 31.29		\$ 3.29		\$ 31.29	\$ -
2023	\$ 2.85		\$ 32.59		\$ 3.42		\$ 32.59	\$ -
2024	\$ 2.97		\$ 33.94		\$ 3.57		\$ 33.94	\$ -
2025	\$ 3.09		\$ 35.35		\$ 3.72		\$ 35.35	\$ -
2026	\$ 3.22		\$ 36.82		\$ 3.87		\$ 36.82	\$ -
2027	\$ 3.35		\$ 38.34		\$ 4.03		\$ 38.34	\$ -
2028	\$ 3.49		\$ 39.94		\$ 4.20		\$ 39.94	\$ -
2029	\$ 3.64		\$ 41.60		\$ 4.37		\$ 41.60	\$ -
2030	\$ 3.79		\$ 43.32		\$ 4.55		\$ 43.32	\$ -
2031	\$ 3.94		\$ 45.12		\$ 4.74		\$ 45.12	\$ -
2032	\$ 4.11		\$ 46.99		\$ 4.94		\$ 46.99	\$ -
2033	\$ 4.28		\$ 48.95		\$ 5.14		\$ 48.95	\$ -
2034	\$ 4.46		\$ 50.98		\$ 5.36		\$ 50.98	\$ -
2035	\$ 4.64		\$ 53.09		\$ 5.58		\$ 53.09	\$ -
2036	\$ 4.83		\$ 55.30		\$ 5.81		\$ 55.30	\$ -
2037	\$ 5.03		\$ 57.60		\$ 6.05		\$ 57.60	\$ -
2038	\$ 5.24		\$ 59.99		\$ 6.30		\$ 59.99	\$ -
2039	\$ 5.46		\$ 62.48		\$ 6.57		\$ 62.48	\$ -
2040	\$ 5.69		\$ 65.07		\$ 6.84		\$ 65.07	\$ -
2041	\$ 5.92		\$ 67.77		\$ 7.12		\$ 67.77	\$ -
2042	\$ 6.17		\$ 70.59		\$ 7.42		\$ 70.59	\$ -

1 Q. Does this conclude your surrebuttal testimony?

2 A. Yes, it does.

CERTIFICATE OF SERVICE

I hereby certify that an original and ten copies of NorthWestern Energy's Surrebuttal Testimony in Docket No. D2015.8.64 have been hand delivered to the Montana Public Service Commission with three copies to the Montana Consumer Counsel this date. It has also been e-filed on the PSC website, emailed to counsel of record, and mailed to the remainder of the service list as follows:

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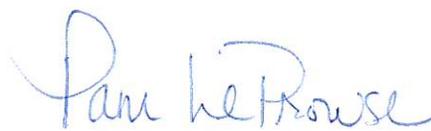
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