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

IN THE MATTER of the Petition of Greycliff Wind Prime, LLC to Set Terms and Conditions for Qualifying Small Power Production Facility Pursuant to M.C.A. § 69-3-603	UTILITY DIVISION DOCKET NO. D2015.8.64
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**GREYCLIFF WIND PRIME, LLC'S RESPONSE TO NORTHWESTERN ENERGY
DATA REQUESTS NWE-014 THROUGH NWE-036**

NWE-014 Regarding: Experience
Witness: Roger Schiffman

a. Please provide a list of matters where you worked on PURPA-related avoided cost calculations.

I have developed energy and capacity price forecasts continually over the last 18 years, in support of over 100 consulting projects. In terms of projects specifically related to avoided cost:

RESPONSE:

2016. Confidential Client. Asset valuation and projected avoided cost for portfolio of QF Generators in California.

2015. Virgin Islands Water & Power Authority, Integrated Resource Plan.

2013. Kauai Island Utility Cooperative, Evaluation of Avoided Cost Methods, and Development of Projected Avoided Cost

2011. Confidential Client. Asset valuation and projected avoided cost for QF Generator in California.

Public Service Commission of Wisconsin, Docket 05-EI-112, Investigation on the Commission's Own Motion Into Barriers to Contracts Between Electric Utilities and Non-Utility Cogenerators and Certain Related Policy Issues, 1992, "Contract Risk in Long-Term Purchase Power Arrangements."

Public Service Commission of Wisconsin, Docket 6630-CE-187, Wisconsin Electric Power Company, 1993, "Memorandum to Commission Presenting Economic Analysis of Competitively Bid Proposals for New Power Plants" (co-authored).

Public Service Commission of Wisconsin, Docket 6690-CE-156, Application of Wisconsin Public Service Corporation for Authority to Increase Electric Generating Capacity (Stage One Competition Among Alternative Suppliers), 1994 & 1995, "Economic Analysis of Competitively Bid Power Plant Proposals" (with Paul Newman), "Contract Risk in Purchased Power Arrangements," "Accounting Treatment for Long-Term Purchased Power Contracts," "Contract Risk and Analysis of True-Up Mechanisms and Balancing Accounts."

b. For each matter identified in subpart a, please provide the following information:

- **Who the calculation was performed for;**

RESPONSE: Client's/agencies are listed in responses above. For asset valuation projects, client identity is listed as Confidential due to Non-Disclosure Agreement.

- **When the calculation was performed; and**

RESPONSE: The year of each project is listed in response above.

- **The name of the regulatory body and docket number, if such calculation was part of a regulatory proceeding; and any documents pertaining to such calculations whether created by you or some other person, party, or regulatory body, including calculation workpapers, final orders, testimony.**

RESPONSE: Regulatory information is listed in responses above. I no longer possess documents related to the calculations, workpapers, final orders, testimony, etc. in applicable regulatory proceedings.

NWE-015 Regarding: Communication re: avoided cost rate

Witness: Roger Schiffman

Please produce all correspondence, whether internal or external including but not limited to email communications, concerning the avoided cost rate proposed by Greycliff in your rebuttal testimony at pages 41-43.

RESPONSE: My communications other than emails subject to attorney work product doctrine and attorney-client privilege was through telephone communications. The privilege log accompanies this response. I have no other communications responsive to this request.

**NWE-016 Regarding: Communication re: NorthWestern's proposed avoided cost rates
Witness: Roger Schiffman**

Please produce all correspondence, whether internal or external including but not limited to email communications, concerning NorthWestern's calculation of its avoided cost rate in this matter.

RESPONSE: *See* response to NWE-015.

**NWE-017 Regarding: FERC Guidance, pages 5-6
Witness: Roger Schiffman**

Please provide documentary support for assertions 1 through 6 found on pages 5 and 6 of your rebuttal testimony concerning the Federal Energy Regulatory Commission's ("FERC") "guidelines to states" for developing avoided cost rates.

RESPONSE: As an example, *see* attached article, "REVIVING PURPA'S PURPOSE: The Limits of Existing State Avoided Cost Ratemaking Methodologies In Supporting Alternative Energy Development and A Proposed Path for Reform."

**NWE-018 Regarding: Other states' methodologies
Witness: Roger Schiffman**

On page 7 of your rebuttal testimony, you testify: "States have adopted a wide variety of approaches in implementing FERC's directives and in establishing avoided cost methodologies." You then list five conceptual issues that states have addressed. Your testimony goes on to describe ten approaches that state Commissions have adopted in establishing avoided cost methodologies.

- a. Please provide a list of the states that you were referring to in this section of your rebuttal testimony.**
- b. Please provide documentary support, by state, for each of the five conceptual issues identified on page 7 of your rebuttal testimony.**
- c. Please provide documentary support, by state, for each of the ten approaches that state regulatory commissions have adopted in establishing avoided cost methodologies.**

RESPONSE: Many sources exist detailing avoided cost methods and approaches. For examples, *see* attached articles entitled

“REVIVING PURPA’S PURPOSE: The Limits of Existing State Avoided Cost Ratemaking Methodologies In Supporting Alternative Energy Development and A Proposed Path for Reform.”

“PUBLIC UTILITY REGULATORY POLICIES ACT (PURPA) COMPLIANCE METHODS”

“PURPA TITLE 2 COMPLIANCE MANUAL”

NWE-019 Regarding: Retained; Purpose

Witness: Roger Schiffman

- a. When were you retained by Greycliff and/or National Renewable Energy Solutions, LLC?**

RESPONSE: I was retained initially in December, 2015 to assist with data requests, and then in January, 2016 to review NorthWestern Energy’s avoided cost calculations

- b. Please provide a copy of your contract for services with Greycliff or National Renewable Energy Solutions, LLC pertaining to this matter.**

RESPONSE: Contract is attached.

- c. When did Greycliff or National Renewable Energy Solutions, LLC ask you to “create an independent avoided cost forecast” for the Greycliff project?**

RESPONSE: Greycliff didn’t formally ask me to “create an independent avoided cost forecast.” Rather, I was asked to review NorthWestern’s avoided cost methodology and calculations. In completing that review, I found a number of issues that in my opinion, are incorrect, as detailed in my rebuttal testimony. I decided to complete an independent forecast of avoided cost as part of the review, as I thought it was necessary in providing a complete review of NorthWestern’s avoided cost projections to include that information in my rebuttal testimony so the Commission would have adequate record information to make a decision.

NWE-020 Regarding: Interconnection Upgrade Cost

Witness: Roger Schiffman

- a. Do you agree that if a Qualifying Facility is required to pay for all interconnection network transmission upgrade costs associated with its project, but is then reimbursed for these costs, then customers of the utility will be required to pay for such costs thereby not remaining indifferent to the purchase of power from a Qualifying Facility?**

RESPONSE: No, I do not agree with the question with the premises stated. *See* response to b., below.

- b. If you do not agree with subpart a, please provide a reasoned response for such disagreement.**

RESPONSE: I believe that the avoided cost calculation must be consistent with FERC rules, including rules designed to ensure nondiscriminatory transmission access. FERC has ruled that

transmission network upgrade costs, meaning costs for transmission facility upgrades beyond what is needed for direct interconnection, provide benefits to the overall transmission network, and are to be funded initially by the project requesting interconnection, and then refunded upon achieving commercial operation. I agree with FERC's reasoning, in recognizing that the network upgrade costs provide benefit to the overall network. It would be discriminatory to apply those costs specifically to a QF project.

NWE-021 Regarding: Establishment of a legally enforceable obligation

Witness: Roger Schiffman

- a. Please provide your understanding of what is required to establish an LEO in Montana.**

RESPONSE: On advice of Greycliff counsel, my understanding is the following requirements must be met to establish a LEO in Montana: (1) that the QF has tendered a proposed PPA with a beginning and end date, with a proposed contract rate consistent with NorthWestern's avoided cost, with sufficient guarantees to ensure performance during the term of the PPA; and (2) the QF has executed an interconnection agreement with NorthWestern.

- b. Please provide all support for the assertion on page 38 of your rebuttal testimony that "Greycliff has previously established an LEO."**

RESPONSE: I am advised by Greycliff counsel that a LEO was previously established in July, 2015, and defer to his legal expertise.

- c. When Greycliff approached NorthWestern in July of 2015 regarding a possible contract for the sale of power to NorthWestern, what commercial operation date did Greycliff propose for this project?**

RESPONSE: I have not been involved in Greycliff contract negotiations. It is my understanding that an earlier commercial operation date was initially planned, but due to delays encountered in receiving avoided cost projections from NorthWestern, and delays encountered in the contracting and regulatory process, the COD has now moved to a later date.

NWE-022 Regarding: Avoided Cost Calculations

Witness: Roger Schiffman

- a. Please provide a detailed explanation for how you calculated the proposed avoided cost calculations found on pages 41 through 43 of your rebuttal testimony.**

RESPONSE: PMRG developed the energy value of avoided cost projections by applying forecast electric energy prices at Mid-C, to projected energy production for the Greycliff project. In developing those projections, PMRG obtained an independent forecast of electricity prices at Mid-C from the Northwest Power and Conservation Counsel Seventh Power Plan. The prices obtained by PMRG were labeled as Draft 1, and were expressed in real 2012\$. PMRG converted those prices to nominal year of occurrence dollars using a 2 percent annual rate of general inflation. PMRG utilized NorthWestern's template for presenting avoided cost estimates,

removed adjustments proposed by NorthWestern related to Day Ahead vs Real Time prices, Interconnection Network Upgrade Costs, and Spinning Reserves. PMRG developed adjustments for Regulation and Supplemental Reserves using a NorthWestern tariff, and also developed a capacity value avoided cost component, based on the levelized cost of a LMS100 natural gas plant, and a 5 percent capacity credit.

PMRG developed an alternative projection of Greycliff avoided cost, by following the same methodology, but using a forecast natural gas price for the Pacific Northwest from the EIA Annual Energy Outlook, applying that natural gas price series to the market heat rate levels implicit in NorthWestern's Mid-C electricity price forecast.

- b. Please provide all assumptions used to derive the proposed Energy Average Avoided Cost (\$/MWh) figures found on pages 42 and 43 of your rebuttal testimony.**

RESPONSE: *See* attached spreadsheet entitled PMRG Greycliff Avoided Cost Projection - Feb 2016.

- c. Please produce, including electronic versions, all supporting workpapers showing the calculation of the avoided costs presented on pages 41 through 43 of your rebuttal testimony, including all supporting data, formulas, supporting worksheets with links intact.**

d.

RESPONSE: *See* attached spreadsheet entitled PMRG Greycliff Avoided Cost Projection - Feb 2016.

**NWE-023 Regarding: AEO 2015 Forecast
Witness: Roger Schiffman**

Please provide support for your assertion that the Northwest Power and Conservation Council's medium level electricity price forecast is appropriate for a Qualifying Facility providing power to an electric utility in Montana.

RESPONSE: The Northwest Power and Conservation Council forecast is developed using a fundamental modeling approach. That approach is appropriate in reflecting key structural changes expected to occur in regional power markets, due to increasingly stringent environmental regulations, and the overall supply and demand dynamics in the power and fuels sectors. It is a very appropriate forecast to use in developing long-term projections of energy prices in the Pacific Northwest, and at the Mid-C trading hub. Since NorthWestern based its avoided cost analysis on power prices at Mid-C, and given previous Commission decisions utilizing power prices at Mid-C in determining QF avoided cost levels in Montana, this is an appropriate forecast to use for Greycliff.

**NWE-024 Regarding: QF-1 rates
Witness: Roger Schiffman**

- a. **Please confirm that NorthWestern's QF-1, WI-1 and CR-1 tariff schedules are not applicable to the Greycliff project.**

RESPONSE: The tariffs cited were used as indications of avoided cost for NorthWestern, and as previously determined prices/cost levels incurred by NorthWestern in providing wind integration and operating reserves.

- b. **If you are unable to confirm subpart a, please explain why not and provide evidence to support your reasoning.**

RESPONSE: *See* response to NWE-024(b). I cannot confirm for this reason.

NWE-025 Regarding: Variable rate option

Witness: Roger Schiffman

- a. **Please confirm that NorthWestern and Greycliff discussed a variable or escalating PPA price during the pendency of this matter.**

RESPONSE: I have not been involved in negotiations between NorthWestern and Greycliff, so have no knowledge about related discussions.

- b. **If you are unable to confirm subpart a, please explain why not.**

RESPONSE: I have not been involved in negotiations between NorthWestern and Greycliff, so have no knowledge about related discussions.

NWE-026 Regarding: PowerSimm modeling

Witness: Roger Schiffman

Please confirm that NorthWestern offered Greycliff an opportunity to view the PowerSimm modeling performed in this docket but Greycliff did not accept the offer.

RESPONSE: I cannot confirm. NorthWestern made an offer to allow Greycliff limited opportunity to view the PowerSimm modeling, for a fee. However, the approach offered by NorthWestern was not useful, because in discussion with Mr. Hansen, Greycliff would not have been allowed to retain any data or to see any detailed analysis, such as hourly data. Instead, NorthWestern's offer was only to allow Greycliff a fee-based viewing session. This approach was inadequate, in it did not afford Greycliff an opportunity to actually examine assumptions and detailed methodology related to PowerSimm modeling.

NWE-027 Regarding: Differential Revenue Requirements Methodology

Witness: Roger Schiffman

On pages 17 and 18 of your rebuttal testimony, you respond to a question regarding how NorthWestern's avoided cost methodology differs from the Differential Revenue Requirements ("DRR") methodology.

- a. In the first sentence of the response, you state that the PowerSimm model did not measure change in “production costs” with and without Greycliff. What “production costs” are you referring to in this answer?**

RESPONSE: Production cost refers to the standard definition in the electricity industry, which is the underlying fuel, variable operating and maintenance, and emissions costs, plus wholesale power sales and purchase net costs, incurred by NorthWestern in operating its Montana power system.

- b. Please provide evidence to support your assertion that “NWE also used the PowerSimm model to develop long-term market price projections at Mid-C.”**

RESPONSE: As stated in my testimony, NorthWestern’s use of PowerSimm is not transparent, so I am unable to provide “evidence” about what NorthWestern actually did. Mr. Hansen’s testimony refers to “market prices” in numerous places when discussing NorthWestern’s PowerSimm modeling. In addition, in response to data request GWP-007, NorthWestern stated “Annual prices are simulated in PowerSimm using the monthly forward price as the basis for the simulations.” Mr. Hansen’s testimony also describes an approach to forecasting electricity prices outside of PowerSimm, by using a forward prices strip, and then applying an “annual escalation rate from the 2015 EIA Annual Energy Outlook.” There are many escalation rates in the Annual Energy Outlook, so the testimony is not specific. Mr. Hansen makes no mention of whether or how PowerSimm’s stochastic features were used in his analysis. Given the lack of transparency or detailed description, it is not clear exactly how NorthWestern used PowerSimm.

- c. Please confirm that NorthWestern used the Intercontinental Exchange escalated by the Energy Information Administration’s 2015 AEO to develop long-term market price forecast for the Greycliff proposed avoided cost.**

RESPONSE: I am unaware of any citation to the source for NorthWestern’s forward price strip, so am unable to make this confirmation.

- d. In light of Mr. Hansen’s prefiled response testimony, see pages 3 to 5, please provide evidence to support your assertion that “NWE did not use PowerSimm to evaluate avoided cost for Greycliff or the net short/sales position on its system on an hourly basis.”**

RESPONSE: NorthWestern refused to provide hourly output in response to Greycliff data requests requesting those data. In workpapers that were provided, in particular in a spreadsheet entitled “13c”, it appear that while PowerSimm calculated net purchase and sales on an hourly basis, those results were then aggregated by month, and that Mr. Hansen’s application of either market prices, or the variable cost of Colstrip 4, was done using monthly net purchase or sales, not hourly. NorthWestern provided no worksheet that showed such calculation being done on an hourly basis.

- e. Please provide evidence to support your assertion that “NWE is almost always in a net purchase position.”**

RESPONSE: In the spreadsheet entitled “13c” provided by NorthWestern in response to Greycliff data requests, reported Market Purchase from the PowerSimm modeling are always substantially higher than reported Market Sales. For example, over the forecast period, monthly Market Purchases average 130,561 MWh in Heavy Load hours, compared to Market Sales which average 1,649 MWh. In Light Load hours, Market Purchases average 48,937 MWh, compared to Market Sales which average 9,061 MWh. Similarly, in Mr. Hansen’s testimony, Exhibit (LPH-1), Offset Purchases quantities are considerably higher than Excess Sales quantities.

NWE-028 Regarding: Sale of excess QF power

Witness: Roger Schiffman

- a. Please confirm that federal regulations, specifically Order 69, “impose no requirement on the purchasing utility to deliver unusable energy or capacity to another utility for subsequent sale.”**

RESPONSE: I cannot confirm the validity of this statement. At the outset, this question is asking me to answer a legal question and I am not a lawyer. Although that language is outlined in Order 69, energy that can be sold into the wholesale market at a profit is “usable” energy in operating a power system. Put another way, if energy is provided by a QF to NorthWestern, and used strictly to “serve native load”, then energy that is freed up from other generating resources, but that can be sold at a profit into the wholesale market, is usable energy. For a utility company to forego economic sales opportunities would be imprudent. Accurate determination of avoided cost, especially using a Differential Revenue Requirement method, must take into account market purchase and sales activity.

- b. If you are unable to confirm subpart a, please explain why not and provide evidence to support your reasoning.**

RESPONSE: At the outset, this question is asking me to answer a legal question and I am not a lawyer. While that language is outlined in Order 69, energy that can be sold into the wholesale market at a profit is “usable” energy in operating a power system. Put another way, if energy is provided by a QF to NorthWestern, and used strictly to “serve native load”, then energy that is freed up from other generating resources, but that can be sold at a profit into the wholesale market, is usable energy. For a utility company to forego economic sales opportunities would be imprudent. Accurate determination of avoided cost, especially using a Differential Revenue Requirement method, must take into account market purchase and sales activity. In short, I disagree with the implied conclusion that energy resold by a utility in a market is not “usable,” and that it should be excluded from an avoided cost calculation.

NWE-029 Regarding: Mid-C Historical Price Series

Witness: Roger Schiffman

- a. Please provide evidence to support your assertion on page 21 that NorthWestern used the Mid-C Historical Price Series or Powerdex to derive an electricity price forecast for the Greycliff project.**

RESPONSE: This question misstates my testimony. My testimony does *not* state that that NorthWestern used Powerdex to derive an electricity price forecast for the Greycliff project. As

stated earlier, NorthWestern has not provided a citation to the source of its forward curve, as far as I know. My testimony points out that even when reporting the same data (historical Day Ahead prices at Mid-C, the Powerdex series has materially different (lower) results. In its analysis, NorthWestern proposed a deduction in avoided cost for “intermittency”, by comparing ICE Day Ahead and Powerdex “Real-Time” prices. Because the two series are not comparable, I don’t believe that calculation is valid or useful in estimating Greycliff avoided cost.

- b. Please confirm that NorthWestern only used Powerdex prices to forecast real time prices in order to account for the fact that Greycliff is an intermittent resource and should not receive a firm energy price.**

RESPONSE: As stated earlier, NorthWestern has not provided a citation to the source of its forward curve as far as I know. My testimony points out that even when reporting the same data (historical Day Ahead prices at Mid-C, the Powerdex series has materially different (lower) results. In its analysis, NorthWestern proposed a deduction in avoided cost for “intermittency”, by comparing ICE Day Ahead and Powerdex “Real-Time” prices. Because the two series are not comparable, I don’t believe that calculation is valid or useful in estimating Greycliff avoided cost.

- c. If you are unable to confirm subpart b, please explain why not and provide evidence to support your reasoning.**

RESPONSE: Please *see* response to NWE-029. b.

NWE-030 Regarding: AECO pricing

Witness: Roger Schiffman

On page 28 of your rebuttal testimony you state, “NWE’s use of AECO results in a significant understatement of natural gas prices and also electricity prices at Mid-C, which results in an understatement of NWE’s actual avoided costs.”

Below are annual forward price strips for Mid-C, AECO, and Stanfield from the January 15, 2016 market close. All of these curves were developed using the same methodology that has been presented in the proceeding. The forward curve is used through July 2020 and escalated thereafter at the annual escalation rate from the Energy Information Administration 2015 Annual Energy Outlook (“AEO”). This escalation maintains the fundamental relationship between electric and natural gas prices as calculated through the market implied heat rates (electric price divided by gas price) for both Mid-C/AECO and Mid-C/Stanfield as shown in the two columns on the right.

The table below uses the same AECO and Stanfield prices from the table above. The Mid-C forward curve in the table on the left is computed by multiplying the AECO forward curve and the Mid-C/AECO implied heat rate. After 2020, the AECO forward curve is multiplied by the Mid-C/AECO implied heat rate from 2020. The Mid-C forward curve on the right is developed by multiplying the Stanfield forward curve and the Mid-C/Stanfield implied heat rate. After 2020, the Stanfield forward curve is multiplied by the Mid-C/Stanfield implied heat rate from 2020. The column in the far right details the variance in the Mid-C

forward curve that was calculated using the AECO forward curve and the Mid-C forward curve that was calculated using Stanfield forward curve.

- a. Please confirm that even though the forward curve for Stanfield is higher than the forward curve for AECO, there is no difference between the Mid-C heavy load forecast derived using the AECO forward curves with the Mid-C/AECO implied heat rate and the Mid-C heavy load forecast derived from the Stanfield forward curves with the Mid-C/Stanfield implied heat rate.**

RESPONSE: I did not prepare this calculation and am being asked to confirm numbers that I did not generate and do not know their origin. As a result, I believe this question is vague, ambiguous, and worse still has nothing to do with my testimony in this Docket. The point made in my testimony is that use of AECO gas prices to model fuel costs for NorthWestern generators, or for generators in the Pacific Northwest, understates fuel cost, because all natural gas is not sourced from Alberta. Electricity price forecasts focused on Mid-C should use a more representative natural gas pricing point and price series, to improve forecast accuracy.

- b. If you do not or cannot confirm subpart a, please explain why not and provide evidence for your reasoning.**

RESPONSE: *See* answer to A, above. This question is well beyond the scope of reasonable discovery. The point made in my testimony is that use of AECO gas prices to model fuel costs for NorthWestern generators, or for generators in the Pacific Northwest, understates fuel cost, because all natural gas is not sourced from Alberta. Electricity price forecasts focused on Mid-C should use a more representative natural gas pricing point and price series, to improve forecast accuracy.

NWE-031 Regarding: NWPCC Forecast

Witness: Roger Schiffman

- a. Why do you believe your forecast conglomerate is better than the EIA forecast used by NorthWestern?**

RESPONSE: first, I disagree that my “forecast conglomerate” is any more or less a “forecast conglomerate” than the methodology utilized by NorthWestern in this proceeding. As stated in my testimony, I believe it is necessary to complete fundamental analysis in order to reflect underlying structural changes in the electricity and fuel markets, in order to accurately develop power price and long-term avoided cost estimates. The NPCC forecast uses a structural approach. It is also derived based on collaboration among multiple stakeholders in the Pacific Northwest, is well-respected in the industry, and provides the Commission with an independent view.

- b. Please provide evidence to support your position.**

- See <https://www.nwcouncil.org/energy/powerplan/7/home/> for description of methodology and assumptions.

NWE-032 Regarding: Figure 7 on page 34

Witness: Roger Schiffman

Please provide all backup data in electronic format with all supporting data, formulas, supporting worksheets with links intact, for Figure 7 – Comparison of Forecast Electricity Prices.

RESPONSE: *See* attached spreadsheet entitled PMRG Greycliff Avoided Cost Projection - Feb 2016.

**NWE-033 Regarding: Transmission Upgrade Costs
Witness: Roger Schiffman**

On page 36 of your rebuttal testimony, you assert that NorthWestern proposes to adjust avoided cost “to reflect the cost of Transmission Network Upgrades.”

- a. Please confirm that NorthWestern has not proposed at this time to deduct any costs associated with “Transmission Network Upgrades.”**

RESPONSE: I cannot confirm this statement. In his Supplemental testimony and exhibits, Mr. LeFave refers to transmission “network upgrades” in proposing a reduction in avoided cost. It is hard for me to determine what else he could mean in this circumstance.

- b. If you are unable to confirm subpart a, please explain why not and provide evidence to support your reasoning.**

**NWE-034 Regarding: GWP-012
Witness: Roger Schiffman**

Please confirm that NorthWestern’s response to Data Request GWP-012 provided, as requested, a revised calculation of avoided costs for Greycliff based on the changes requested by Greycliff in the data request.

RESPONSE: Based on the language in the data response provided by NorthWestern, it is not clear what changes were made in developing the revised calculation of avoided cost. NorthWestern’s attorney has represented that only the changes requested by Greycliff were reflected. I am unable to independently make that confirmation.

**NWE-035 Regarding: NWPCC Medium Natural Gas Price Forecast
Witness: Roger Schiffman**

On page 40 of your rebuttal testimony, you discuss possible differences between the Northwest Power and Conservation Council’s (“NWPCC”) Medium Natural Gas price forecast that you proposed should be used to calculate avoided costs and the NWPCC Medium Natural Gas price forecast that NorthWestern received directly from NWPCC and provided in this docket as part of the updated response to Data Request PSC-012a. You assert that the difference between these two price forecasts is that Greycliff applied a 2% annual inflation rate to the forecast.

- a. Please confirm that the NWPCC forecast figures provided by NorthWestern in the updated response to Data Request PSC-012a on March 30, 2016 were escalated for inflation but that the title of the chart is mislabeled.**

RESPONSE: The data in the spreadsheet you refer to are pasted as values, with no calculations. It is not possible to verify with certainty, but based on the values presented, they appear to be stated in nominal dollars. However, NorthWestern's characterization in its data response, stating that the NPCC natural gas prices provided by Greycliff are "much higher" is inaccurate.

- b. If you are unable to confirm subpart a, please explain why not and provide evidence to support your reasoning.**

RESPONSE: *See* response to NWE-035(a).

NWE-036 Regarding: Proposed Energy Average Avoided Cost, Table 7, page 42

Witness: Roger Schiffman

Please provide evidence of where or from what market Greycliff will receive \$35.66 per megawatt-hour for its energy in 2018.

RESPONSE: It is unclear what is intended by this question. Greycliff's intended market is to sell its energy to NorthWestern, pursuant to PURPA requirements.

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Attorney for Petitioner Greycliff Wind Prime, LLC

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

IN THE MATTER of the Petition of
Greycliff Wind Prime, LLC to Set Terms
and Conditions for Qualifying Small Power
Production Facility Pursuant to M.C.A. §
69-3-603

UTILITY DIVISION
DOCKET NO. D2015.8.64

**PRIVILEGE LOG RESPONSIVE TO NORTHWESTERN DATA REQUESTS NWE-015
AND NWE-016**

1. Email, dated December 7, 2014, from Michael Uda to Roger Schiffman, and responsive email from Mr. Schiffman regarding same. The subject matter is NorthWestern's questions regarding Greycliff's propounded discovery in response to an inquiry by Mr. Patrick Pelstring of Greycliff. The subject matter includes Greycliff's theory of avoided cost calculation and litigation strategy. This was communication between Mr. Schiffman and Mr. Uda and is privileged under the work product doctrine and the attorney-client privilege as it discloses the mental impressions and opinions of undersigned counsel and the communication was in response to a verbal request for legal advice by Greycliff, including Mr. Patrick Pelstring.

2. Email, dated December 21, 2015, from Michael Uda to Roger Schiffman, subject matter is Greycliff's theory of avoided cost calculation and litigation strategy.
3. Email, dated January 21, 2016, from Michael Uda to Roger Schiffman, Mr. Patrick Pelstring, Mr. Ryan Pelstring, regarding the theory and strategy of NorthWestern's and Greycliff's respective cases. This was communication between Mr. Uda, his clients, and Mr. Schiffman and is privileged under the work product doctrine and the attorney-client privilege as it discloses the mental impressions and opinions of undersigned counsel and the communication was attorney-client communications between attorney and client regarding the subject matter of this case.
4. Email, dated January 25, 2016, email by Michael Uda to Roger Schiffman regarding substantive avoided cost analysis pursuant to a request for attorney advice by Mr. Patrick Pelstring. This communication constitutes work product and contains mental impressions and legal advice and is privileged under both the work product doctrine and the attorney-client privilege.
5. Email dated March 9, 2016, Roger Schiffman to Michael Uda, regarding preliminary avoided cost estimates and request for legal advice pursuant to a verbal request made by Mr. Patrick Pelstring seeking legal advice. This document contains mental impressions of counsel and constitutes legal advice to Mr. Schiffman and Mr. Pelstring and is protected under the work-product doctrine and the attorney-client privilege.
6. Email dated March 17, 2016, Roger Schiffman to Michael Uda, and an email dated that same day from Mr. Uda to Mr. Schiffman and Greycliff personnel Mr. Patrick Pelstring, Mr. Jesse Hopkins-Hoel, Mr. Ryan Pelstring on the same day, regarding

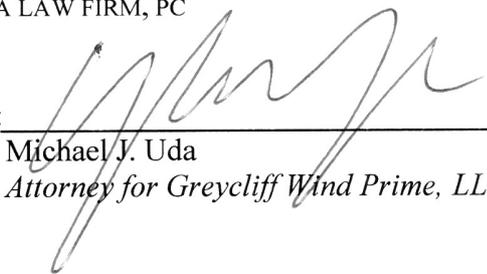
drafts of potential avoided cost testimony and analysis of potential avoided cost results. This document is attorney-work product and consists of legal advice by Mr. Uda to Greycliff and Mr. Schiffman, contains an attorney's mental impressions and is protected by the work product doctrine and the attorney-client privilege.

7. Email dated March 21, 2016, Michael Uda to Roger Schiffman, proposed draft prefiled testimony of Mr. Schiffman. Contains the mental impressions of attorney and consists of legal advice to Greycliff pursuant to attorney-client communications by Mr. Patrick Pelstring. This document is protected both by the work product doctrine and the attorney-client privilege.
8. Email dated April 8, 2016, from Roger Schiffman to Michael Uda, regarding proposed additional discovery questions to NorthWestern and proposed adjustments to avoided cost. Contains mental impressions and legal advice from counsel to Mr. Ryan Pelstring and Mr. Patrick Pelstring of Greycliff as well as Mr. Schiffman. This document is protected by both the work product and attorney-client privilege.
9. Email dated April 20, 2016, from Roger Schiffman to Michael Uda and email from Mr. Uda to Mr. Patrick Pelstring, Mr. Ryan Pelstring and Mr. Schiffman regarding NorthWestern discovery responses. These emails contain the mental impressions of counsel and legal advice to his client and the document is thus protected by the work product doctrine and attorney-client privilege.
10. Email dated April 29, 2016, from Roger Schiffman to Michael J. Uda regarding testimony and potential discovery and tendering of legal advice to Mr. Schiffman pursuant to request of Mr. Patrick Pelstring. This document contains mental impressions and legal advice by Mr. Uda to Mr. Schiffman and to Mr. Pelstring.

11. After discussing the matter with my expert, we can locate no other documents which are unprivileged and responsive to NWE-015 and NWE-016.

RESPECTFULLY SUBMITTED this 18th day of May, 2016.

UDA LAW FIRM, PC

By: 

Michael J. Uda

Attorney for Greycliff Wind Prime, LLC

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing has been served on this 18th day of May, 2016 upon the following by first class mail postage pre-paid:

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I hereby certify an original was e-filed, and six copies of the foregoing were hand-delivered to the following:

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Jackie Haskins-Legal Assistant