

July 15, 2016

MEMORANDUM

TO: The Public Service Commission
FROM: Robin, Bob, Laura, Neil, Will
SUBJECT: Docket No. D2015.8.64, Greycliff petition for QF contract rates and terms

PURPOSE

This memo provides analysis of the technical arguments submitted on contested issues in Docket No. D2015.8.64, in the matter of the Petition of Greycliff Wind Prime, LLC (Greycliff), for the Public Service Commission (Commission) to set terms and conditions in a qualifying small power production facility (QF) agreement for Greycliff to provide electric power to NorthWestern Energy (NorthWestern). Parties to this proceeding include Greycliff, NorthWestern, and the Montana Consumer Counsel (MCC). In this memo we examine the contested issues raised by the parties. Based on the analysis, we provide recommendations.

BACKGROUND

On August 17, 2015, Greycliff Wind Prime, LLC (Greycliff), filed a *Petition to Have Commission Set Contract Terms and Conditions Pursuant to MCA § 69-3-603* (Petition). The Commission is obliged under Mont. Code Ann. § 69-3-603(2)(a) (2015) to determine the rates and conditions of a power purchase agreement between Greycliff and NorthWestern within 180 days of the petition. In this case, the parties mutually agreed to delay the proceeding to allow NorthWestern and Greycliff to negotiate, which extended the deadline for issuing a final decision.

The Commission must encourage a long-term contract for the purchase of electricity by NorthWestern from Greycliff in order to enhance the economic feasibility of the QF. Mont. Code Ann. § 69-3-604(2). The established rates must consider the availability and reliability of the electricity produced. *Id.* at (3). Finally, the Commission shall set the rates using NorthWestern's avoided cost over the term of the contract. *Id.* at (4). Pursuant to Mont. Code Ann. § 69-3-604(5), the Commission has adopted rules further defining rights and obligations of QFs and utilities. Mont. Admin. R. 38.5.1901 *et seq.*

The proceeding included several rounds of prefiled testimony, including direct, response, supplemental response, revised supplemental response, rebuttal, and surrebuttal testimony. All prefiled testimony was subject to discovery. The Commission held a public hearing on May 31, 2016, to admit record evidence and afford witness cross-examination. Greycliff witness Roger Schiffman also provided oral rebuttal to NorthWestern's prefiled surrebuttal testimony. Adopted exhibits and transcript references are listed by witness in the table below.

Exhibits and Transcript Reference by Witness		
Witness	Exhibits	Transcript Reference
Robert Stanton Walker	GWP-1 Direct	Tr. 32:20-37:1
Roger Schiffman	GWP-2 Rebuttal	Tr. 175:23-191:18
Bleau J. LaFave	NWE-1 Response; NWE-2 Add. Response; NWE-3 Supp. Response; NWE-4 Rev. Supp. Response; NWE-5 Surrebuttal; NWE-6 Int. Exh. BJL-1_rev_2	Tr. 68:13-121:6; and Tr. 164:23-171:3
Luke P. Hansen	NWE-7 Response; NWE-8 Supp. Response; NWE-9 Surrebuttal; NWE-10 Int. Exh. LPH-1 Revised.	Tr. 122:14-163:12
Patrick J. DiFronzo	NWE-11 Supp. Response	NA
Jaime Stamatson	MCC-1 Direct	Tr. 172:7-173:25

In briefing, the parties defined several issues for Commission decision. These issues may be pooled into three general categories: 1) Whether NorthWestern incurred a legally enforceable obligation to purchase power from Greycliff on July 2, 2015; 2) appropriate methods and inputs to set the avoided cost rate; and 3) other contract terms and conditions.

ANALYSIS

Issue 1. Did Greycliff incur a legally enforceable obligation?

In Order 6444e in Docket D2002.8.100, the Commission determined a bright line test for the establishment of a legally enforceable obligation (LEO). This test was based on a review of relevant statute, and the tests utilized by other states. The Commission found that “the touchstone of a legally enforceable obligation ... is an absolute, unconditional commitment to deliver energy, capacity, or energy and capacity at a future date.” Order 6444e, Dkt. D2002.8.100, ¶ 45 (June 4, 2010). The Commission determined that in order to establish an LEO, a qualifying facility must “tender an executed power purchase agreement to the utility with a price term consistent with the utility’s avoided costs, with specified beginning and ending dates, and with sufficient guarantees to ensure performance during the term of the contract, and an executed interconnection agreement.” *Id.* ¶ 47.

In *Whitehall Wind, LLC v. Mont. Pub. Serv. Com.*, the Montana Supreme Court found that the “Commission did not exceed its statutory authority in concluding that evidence of a utility’s refusal to negotiate, without more, is insufficient to establish that a qualifying facility has committed itself to the proposed project.” *Whitehall*, 2015 MT 119, ¶ 17, 379 Mont. 119, 347 P.3d 1273. However, the Court “decline[d] to opine whether the Commission’s bright-line prospective test, announced in its order, complies with PURPA.” *Id.* ¶ 18.

Greycliff asserts that it incurred an LEO on July 2, 2015. Pet. Post Hr'g Br. p. 6 (June 10, 2016). On July 2, 2015, Greycliff sent a letter to NorthWestern, which included a signed contract (with a price term that Greycliff states is consistent with the information available to it at the time), and a signed interconnection agreement. *Id.* Greycliff states that the contract had a beginning and ending date, as well as "sufficient guarantees to ensure Greycliff's performance." *Id.* At first blush, the facts may appear to conform to the Commission's bright line test set forth in Order 6444e. However, NorthWestern has a different interpretation.

NorthWestern argues first and foremost that, contrary to the bright line test, that the price term was not in fact consistent with NorthWestern's avoided costs. NorthWestern states that Greycliff offered a "random, unsubstantiated rate" to serve as the utility's avoided cost rate. NorthWestern Post Hr'g Br. pp. 4-5 (June 24, 2016). Unfortunately, absent a Commission determination of avoided costs, it is difficult for either party to state with any certainty that a specific price term is consistent or for that matter inconsistent with the utility's actual avoided costs. Greycliff argues that it did the best it could with the information it possessed at the time. Pet. Post Hr'g Br. p. 7.

Another issue is the Guaranteed Commercial Operation Date. This date has changed during the course of this docket. Greycliff asserts that it made the request to change the Guaranteed Commercial Operation Date "because NWE's construction schedule for completing the interconnection with Greycliff's project is 14 months." *Id.* at 10. Greycliff also asserts that the delays in this docket necessitated a delayed Guaranteed Commercial Operation Date. *Id.*

These two issues, together with the disagreement, or rather, unknowability of NorthWestern's avoided costs at the time Greycliff asserts it incurred an LEO and the change in Guaranteed Commercial Operation Date, cast doubt on whether or not Greycliff did in fact incur an LEO on July 2, 2016, according to the Commission's bright line test in Order 6444e. Namely, it appears uncertain that Greycliff provided a "price term consistent with the utility's avoided costs" and "specified beginning and ending dates," as required by the Commission's bright line test. Whether it was even possible for Greycliff to provide these requirements, given the circumstances, is doubtful. However, a strict interpretation of the Commission's bright line test outlines certain requirements for the incursion of an LEO, and strictly speaking, Greycliff does not appear to have incurred an LEO.

Issue 2. What methods and inputs should be used to set an avoided cost rate?

Avoided costs are the incremental costs to an electric utility of energy and capacity which, but for the purchase from a QF or QFs, the utility would generate itself or purchase from another source. Mont. Admin. R. § 38.5.1901(2)(a) (2015). Avoided costs can be estimated using a variety of methods and estimates can be sensitive to underlying inputs.

In this case the Commission must determine a just and reasonable rate for power purchased from Greycliff based on an estimate of the costs NorthWestern could avoid with such purchases over the

long-term. Ideally, customers should be economically indifferent to purchasing Greycliff power compared to purchasing energy and capacity through some mix of competitively procured long and short-term power purchase agreements or new NorthWestern-owned resources.

In its Petition, Greycliff proposed an avoided cost rate of \$50.35/MWh, which was based in part on the \$50.49/MWh avoided cost rate approved by the Commission on April 10, 2015, in Order 7347a, Docket No. D2014.4.43 (Greenfield Docket). Ex. GWP-1, 5. In rebuttal testimony, Greycliff provided alternative estimates of NorthWestern’s avoided costs that it contends support its proposed rate. Ex. GWP-2, 42.

NorthWestern opposed this rate, asserting that it no longer reflects its avoided costs. NorthWestern proposed a “carbon included” avoided cost rate of \$35.65/MWh based on its current modeled costs¹. Ex. NWE-1, 14:11-16:23; Ex. NWE-6, p. 1. According to NorthWestern, market electricity and natural gas prices have decreased since the Greenfield proceeding. Ex. NWE-7, 7:13-8:3, Table 1.

The table below compares NorthWestern’s and Greycliff’s avoided cost estimates. The analysis that follows addresses the parties’ disagreements with respect to each component of the total avoided cost and explains staff’s recommendations. Staff’s recommended total rate is between the Greycliff and NorthWestern proposals.

Comparison of Proposed Avoided Cost Calculations				
	NWE Revised Proposal ¹	GWP Rebuttal Proposal ²	GWP NPCC Final Draft ³	Staff Proposal ⁴
Energy Mid-C Market Value	\$ 49.59	\$ 53.10	\$ 49.62	\$ 49.92
Montana Basis Adjustment	(4.56)	-	-	(4.56)
Long Position Adjustment	(1.74)	-	-	-
Non Firm Power Adjustment	(1.99)	-	-	-
Interconnection Network Upgrades	(5.40)	-	-	-
Capacity Value	1.98	1.78	1.78	1.98
Wind Integration Costs				
Regulation - 25 Year Levelized	(0.52)	(0.89)	(0.89)	(0.14)
Spinning Reserve Service	(0.61)	-	-	(0.61)
Supplemental Reserves Service	(1.09)	(0.61)	(0.61)	(1.09)
Total	\$ 35.65	\$ 53.39	\$ 49.90	\$ 45.49
1: Staff Estimate based on Revised Supplemental Response Testimony and Ex. NWE-6 2: Staff Estimate based on Response to Data Request NWE-22 (NPCC preliminary draft 7th Power Plan) 3: Staff Revision of GWP Rebuttal based on the NPCC 7th Power Plan with 2% nominal price escalation 4: Using January 2016 forward pricing escalated at the EIA 2015 AEO Henry Hub rate of 4.25% after July 2020				

¹ This rate was proposed in revised supplemental response testimony. The “carbon-included” (i.e. including a carbon adder to the market forecast) rate proposed by NorthWestern in response testimony was \$38.58/MWh.

The parties' avoided cost proposals reflect different estimates of avoidable energy costs, reflecting differences in how they account for factors that affect avoided costs such as output intermittency and interconnection costs. The parties generally agree on avoided capacity costs and inclusion of CO₂ emissions costs. In this section, we describe the differences in the parties' approaches to estimating avoidable energy costs and provide recommendations.

Market-based avoided energy costs

Greycliff proposed using the Northwest Power Planning and Conservation Council's 7th Power Plan forecast of Mid-C electricity prices (NPCC forecast) to estimate long-term avoidable energy costs. It contends that the NPCC forecast is transparent, was developed using rigorous, fundamental analysis, and reflects structural changes in the industry. Ex. GWP-2 p. 33. It asserts that the Intercontinental Exchange (ICE) forward market prices, which NorthWestern relies upon, represent limited surveys of transactions with zero volume and do not incorporate fundamental information such as expected changes to federal regulations and other market structures. *Id.* at 36; GWP Init. Br. 11-14. Based on the NPCC draft forecast wholesale electricity prices at Mid-C, Greycliff estimated an avoided cost of \$53.39/MWh. Ex. GWP-2, 42; Response to Data Request (DR) NWE-022.

NorthWestern projected Mid-C electricity prices using ICE forward market prices through July 2020. Thereafter, it applied an escalation rate derived from the Energy Information Administration 2015 Annual Energy Outlook (AEO) nominal Henry Hub natural gas price forecast. Tr. 140:6-141:23, 147:4-148:3. NorthWestern asserted that the NPCC forecast Greycliff used was a draft version and that the final forecast is 9.5% lower. Tr. 135:6-14.

Use of forward market prices such as those developed by ICE has been a consistent feature of NorthWestern's market price forecasting approach for some time; the approach has been used in avoided cost rate setting since at least 2010. Forward market prices reasonably reflect near-term market fundamentals and expectations. The Commission has used AEO escalation rates to extend near-term forward prices in a way that captures an analysis of long-term market fundamentals. This market price forecasting approach could use either AEO escalation rates or NPCC forecast escalation rates.

Staff finds NorthWestern's market price forecast reasonable given that it follows an approach that the Commission has approved in other QF dockets. However, staff finds that the 2015 AEO nominal Henry Hub forecast shows 4.25% annual escalation for the period 2020 to 2040, rather than the 4.15% used by NorthWestern. DR PSC-050c. While it could be acceptable to apply an escalation rate derived from the NPCC forecast, which would be 4.68% per year for 2020 through 2035, the proposal to use the NPCC forecast emerged relatively late in the proceeding and deviates from past Commission practice.

Montana Basis Adjustment

Greycliff opposed any adjustment to forecast Mid-C market prices to account for transmission costs. Greycliff stated that NorthWestern failed to justify such an adjustment prior to hearing, which violated Greycliff's due process rights. GWP Init. Br. 15-16; GWP Reply Br. 13-15.

NorthWestern asserted that market-based power transactions in Montana reflect a discount to Mid-C prices based on an ability to partially avoid transmission charges associated with delivering power generated in Montana to Mid-C. NorthWestern estimated the discount to be \$4.33/MWh plus an adder of 2% for line losses. Tr. 144:13-145:2. NorthWestern acknowledged that the retirement of Colstrip Units 1 and 2 could affect the Montana basis differential, but it did not attempt to quantify the impact. *Id.* 137:20-138:11.

Staff finds that Mid-C market prices should be adjusted to account for the current Montana basis differential. Such an adjustment is consistent with the market price forecasts in NorthWestern's 2013 and 2015 resource plans as well as the hydroelectric preapproval docket (D2013.12.85), and off-system hedge evaluation in Electric Tracker dockets from 2012 through 2015.

Avoided Costs when NorthWestern is in a Long Position

Greycliff opposes any adjustment to forecast Mid-C market prices in time periods when NorthWestern projects that it will have sufficient resource to satisfy its load serving requirements. Greycliff asserts that if NorthWestern were in a long position and Colstrip Unit 4's variable cost was less than market, NorthWestern would run CU4, sell the surplus power, and credit the revenue to customers. Thus, Greycliff contends that NorthWestern's avoided cost should be based on market prices when NorthWestern is in a long position. Ex. GWP-2, 18-19.

NorthWestern contends that if it is projected to be in a long position and the variable cost of CU4 is less than the forecast market price, the CU4 variable cost should become the basis for the avoided cost because CU4 could be turned down to accommodate Greycliff's power. NorthWestern stated that it has acquired a supply portfolio to protect its customers from the market, and to pay Greycliff market when the portfolio is long would re-expose customers to market risk. *Id.* 102:8-105:10. NorthWestern asserted that customers should receive the benefit of any surplus sales revenues. Tr. 109:8-110:5.

Given the market-based approach to estimating avoided energy costs that NorthWestern and Greycliff both use in this case, staff agrees with Greycliff that CU4 variable costs should not become the basis for avoided costs during periods when NorthWestern projects that it will be in a long position. A long-term fixed priced QF PPA is a fixed-price hedge similar to a utility's acquisition of a generating resource. When NorthWestern valued the acquisition of its hydroelectric resources, it valued all output at market prices, even when that output occurred in periods when NorthWestern projected that it would be in a long position. QFs should be evaluated using the same approach.

Non-firm Power Adjustment

Greycliff opposes any adjustment to Mid-C market prices attributed to a difference in the quality (i.e., firm vs. non-firm) of the power provided by a wind project compared to generic market purchases.

NorthWestern proposed to adjust forecast market prices to reflect the diminished value of intermittent wind power compared to market purchases. Ex. NWE-1, 8:13-23. NorthWestern's adjustment would reflect an observed difference between a series of ICE day-ahead index prices and a corresponding series of Powerdex real-time index prices. Ex. NWE-6. NorthWestern contended that price differences represent a difference in the value of firm energy compared to non-firm, intermittent energy. At the hearing NorthWestern acknowledged that a commitment to deliver day-ahead power is equivalent to a commitment to provide capacity and that the five percent capacity value attributed to wind QFs in NorthWestern's QF-1 tariff can be viewed as an adjustment for intermittent value. Tr. 88:19-89:16.

Staff recommends no adjustment to forecast market prices based on NorthWestern's firm/non-firm power quality distinction. NorthWestern did not adequately support the alleged distinction with references to established regulatory theory or standard utility practice. DR PSC-014. Record evidence does not show that the observed difference between day-ahead and real-time price indices, if real, is attributable solely or partially to the quality of power generation underlying the prices. Nor has NorthWestern proposed similar adjustments in valuations of its own intermittent resources. Tr. 111:9-15.

Interconnection Network Upgrades

NorthWestern reduced its avoided cost figure by \$5.40/MWh to remove the estimated cost of interconnecting the Greycliff facility to NorthWestern's transmission network. Ex. NWE-3, 6:20-7:2; Ex. NWE-6. NorthWestern's Transmission Department estimated the interconnection cost to be \$3.6 million. Ex. NWE-3, 6:1-4. NorthWestern proposed that Greycliff would pay the interconnection cost initially, with full reimbursement from NorthWestern in accordance with FERC rules and Commission order. *Id.* 4:1-11, Order No. 7108e, ¶ 85. The cost of the facilities would be eventually subsumed into NorthWestern's rate base and included in transmission rates. Tr. 94:1-7. Ex. NWE-3, 5:15-17.

Greycliff testified that reducing avoided cost to compensate for interconnection costs would be discriminatory because a merchant plant would be entitled to full reimbursement of these costs, yet would not be assessed, as NorthWestern proposed, a deduction from the price of purchased energy. Tr. 57:25-58:22. NorthWestern countered that a merchant generator, unlike Greycliff, would be subject to transmission charges, and reimbursement of its interconnection costs is achieved through credits on those charges. For the Greycliff project, NorthWestern's Supply

Department, not Greycliff, is the transmission customer, and NorthWestern's customers will be paying for the interconnection facilities. Tr. 99:19-100:17.

NorthWestern testified that it would not incur similar interconnection costs through either replacement purchases at market or delivery from existing resources. Ex. NWE-3, 5:4-12. NorthWestern admitted that it expects to incur interconnection network upgrade costs as it installs the resources proposed in its 2015 Resource Procurement Plan. Tr. 97:10-13. It asserted that proposed resources are shaped, dispatchable resources that would not be delayed or avoided by the purchase of Greycliff power. *Id.* 96:7-21. NorthWestern admitted that its PowerSimm analysis of Greycliff used NorthWestern's current portfolio and did not allow the displacement or postponement of the resources in that portfolio. *Id.* 129:12-130:12.

Under Commission precedent, Greycliff is ultimately responsible only for costs that exceed "the corresponding costs which the electric utility would have incurred if it had not engaged in interconnected operations, but instead generated an equivalent amount of electric energy itself or purchased an equivalent amount of electric energy or capacity from other sources." Docket No. D2010.2.18, Order No. 7068b, ¶ 83. NorthWestern is required to evaluate transmission costs associated with avoidable resources or purchases, from which estimates of the incremental costs of QF upgrades may be informed. *Id.* ¶ 84.

In Docket No. D2010.2.18, the Commission found that "[s]ince NWE does not identify those interconnection costs for Kenfield that are in excess of the corresponding costs which NWE would otherwise incur for avoidable resource acquisitions or purchases, the PSC cannot determine Kenfield's interconnection cost responsibility under PSC rules." Order 7068b, ¶ 83. In that case, the Commission determined that the wind developer (Kenfield) would not be responsible for any system mitigation costs, since NorthWestern had planned to acquire wind resources, and that, without persuasive evidence to the contrary, Kenfield-related interconnection costs in excess of alternative interconnection costs were assumed to be zero. *Id.* ¶ 87. Similarly, in Docket No. D2010.7.77, the Commission found that "without an estimate of network upgrade costs for [NorthWestern's] avoidable resources it is not possible to apply ARM 38.5.1904." Order 7108e, ¶ 84.

A merchant generator is not strictly comparable to a QF, in that delivery of the merchant's product over the transmission system will not require network service. FERC orders have authority regarding transmission relations between NorthWestern and merchant plants. NorthWestern is not required to purchase electricity from a merchant at avoided cost. The appropriate comparison in this case is the cost treatment of QFs to the cost treatment of other energy supply resources under NorthWestern's ownership or control. Therefore, regarding responsibility for interconnection network upgrade costs, the Commission should reject the comparison of QFs to merchant plants.

NorthWestern proposed that the entire \$3.6 million in expected interconnection upgrade cost be treated as a reduction in avoided cost, whereas the Commission has established that only the

incremental cost of such upgrades should be removed from avoided cost. An accurate estimate of such an increment in this case would require some knowledge of the expected cost of upgrades but for the purchase of power from Greycliff. Although that knowledge might be obtained through a differential revenue requirements analysis of the Greycliff project, including the expected upgrade costs of all current and future avoidable assets, the record here does not provide that analysis or other convincing evidence that power purchased from Greycliff would not displace or postpone some measure of additional upgrade cost associated with resources proposed in NorthWestern's 2015 Resource Procurement Plan.

In this docket, NorthWestern is not planning or proposing to acquire new wind resources, so it is not strictly analogous to previous proceedings. Nonetheless, NorthWestern has failed to provide an estimate of incremental interconnection costs greater than zero but less than \$3.6 million, and it has not substantially supported its assertion that incremental costs should equal the entire estimated cost of the Greycliff interconnection upgrade. Staff recommends that while some reduction of the contract rate to correct for upgrade costs may be advised to protect customers, a 100% reduction would not be supported by the record. The Commission will have to rely on its own reasonable judgment if it decides to estimate a partial reduction of total cost.

Wind Integration Costs

NorthWestern estimated Greycliff integration costs to be \$0.52/MWh for regulation reserves, \$0.61/MWh for spinning reserves, and \$1.09/MWh for supplemental reserves, for a total integration rate of \$2.22/MWh. Ex. NWE-6, p. 1. The regulation rate was based on the incremental costs of operating the 45 MW of Dave Gates Generating Station (DGGs) allocated to the regulation of wind resources, applied to 18% of Greycliff's nameplate capacity, or 4.5 MW. *Id.* NorthWestern derived the spinning and supplemental reserves rates from NorthWestern's current Transmission Tariff, escalated at 2% annually and levelized. Ex. NWE-1, 9:12-18.

Greycliff proposed an integration rate of \$1.49/MWh, based upon wind integration charges in NorthWestern's WI-1 Tariff, and contingency reserve charges in its CR-1 Tariff. Ex. GWP-2, pp. 10-11. NorthWestern responded that the WI-1 and CR-1 tariffs do not apply to QFs exceeding 3 MW in size and that Greycliff failed to adjust for spinning reserves. Ex. NWE-5, 8:7-9:13. NorthWestern stated that the zonal factor applied to Greycliff under the zonal regulation method observed in the WI-1 Tariff would be 5% rather than 18%, and that the levelized cost of regulation reserves would be \$0.14/MWh rather than \$0.52/MWh. DR PSC-017d. It argued that a rate based on 5% would underestimate the cost of regulation reserves for Greycliff and violate customer indifference. NWE Resp. Br. 25.

The Commission adopted the zonal regulation method used to set WI-1 rates based in part on a finding that concentrated wind development increases integration costs. Docket No. D2012.1.3, Order 7199d, ¶ 65. The method derived three rates for three zones defined according to lineal

distance from the Judith Gap wind project. The method addressed a “need for long-term integration rates that reflect the higher costs of additional wind development near Judith Gap.” *Id.*

The same finding indicated a need for more intensive analysis of the integration costs of wind development. “In addition, uncertainties about how actual wind development will proceed and deviate from the results in the GENIVAR Study, and uncertainties about the pace and effectiveness of shorter scheduling intervals indicate a need to closely monitor QF development and NWE’s balancing area performance so that appropriate rate adjustments can be implemented and uneconomic resource decisions can be avoided.” *Id.*

A later finding indicated that NorthWestern had not met its burden to accurately monitor the incremental integration cost of additional wind development and its impact on the integration capacity of DGGs.

Although this issue has been percolating for many years, NorthWestern is still unable to accurately estimate its own integration capacity requirements, and has still not evaluated the geographic diversity effects of existing wind resources. NorthWestern’s estimates of remaining DGGs capacity rest on results from the GENIVAR study, but the development of wind on its system has not resembled any of the scenarios studied, and DGGs does not actually operate the way it was modeled. NorthWestern does not appear to have made any substantial progress toward evaluating current wind integration requirements or planning for future requirements. In this proceeding, NorthWestern did not provide sufficient information for the Commission to change the wind integration component of standard avoided cost rates. Docket No. D2014.1.5, Order 7338b, ¶ 25.

The record in this proceeding provides no indication that NorthWestern has accurately estimated either the incremental cost of integrating Greycliff or the impact of Greycliff on the integration capacity of DGGs. Staff recommends that the Commission adopt the rate of \$0.14/MWh for regulating reserves rather than NorthWestern’s proposed rate of \$0.52/MWh. This change would reduce the total cost of integration from \$2.22/MWh to \$1.84/MWh.

Issue 3: What contract terms are reasonable?

Definition of “Emergency Condition” (p5 in contract)

Greycliff’s proposed definition includes a requirement that NorthWestern’s energy purchases from Greycliff contribute to an emergency situation. NorthWestern’s definition proposes a more general definition, which could allow the uncompensated curtailment of Greycliff’s energy supply whether Greycliff’s operation was contributing to the emergency situation or not.

NorthWestern argues that its definition is based on FERC’s definition of a system emergency under 18 CFR §292.101(b)(4), which includes any condition on a utility’s system that is likely to result in disruption of service to customers or endanger life or property.

Mont. Admin. R. 38.5.1903(1) states that a utility must purchase energy made available by a QF except during a system emergency “if such purchase would contribute to the emergency.” NorthWestern should only be able to curtail or interrupt the delivery of energy from Greycliff if Greycliff’s output is contributing to an emergency and curtailment or interruption is necessary to address a system emergency as defined in 18 CFR §292.101(b)(4). Staff recommends adoption of Greycliff’s proposed language.

Curtailment Rights (Section 6.7.1)

Greycliff’s language for curtailment right places restrictions on when NorthWestern can curtail power from Greycliff, allowing curtailments when they are “consistent with 18 CFR. §292.304(f) and decisions of the Federal Energy Regulatory Commission interpreting this regulation.” Greycliff Init. Post-H’rg Br.27-28.

NorthWestern’s proposed curtailment right language allows it to curtail the delivery of energy from Greycliff at any time for any reason deemed necessary by NorthWestern. NorthWestern argues that Greycliff’s position is based on FERC’s decision in *Pioneer Wind Park I, LLC*, which is a declaratory order that is not binding law and does not trump Commission rules.

Any curtailment should occur only with identifiable and reasonable cause. Staff recommends adoption of Greycliff’s proposed language.

Curtailment during “light loading periods” (Section 6.7.4)

Greycliff proposes to prohibit NorthWestern from curtailing power from Greycliff during light loading periods. Greycliff argues that curtailment during light loading periods is prohibited by PURPA and FERC’s implementing regulations under 18 CFR §292.304(f).

NorthWestern wants the contract to state that it “is not obligated to accept or pay for energy from Greycliff if it will result in costs greater than those which NorthWestern would incur if it did not make such purchases.” *Id.* 28. NorthWestern’s language would allow it to curtail Greycliff’s power at periods when it would have to cut back on base-load generation to purchase energy from Greycliff followed by an immediate need to meet a sudden high peak in demand. NorthWestern states that this is in line with Mont. Admin. R. § 38.5.1903(1), which allows a utility to curtail purchases if they will result in costs greater than those the utility would incur if it did not make such purchases during light loading periods. NorthWestern also believes that Greycliff did not establish an LEO, and therefore must sell its power on an as available basis.

The economic effects of QF power sales to a utility during light loading periods can, and should, be addressed in the development of the contract rate. Although staff finds that Greycliff does not have an LEO, it did petition the Commission to set long-term contract terms and conditions. Staff recommends adoption of Greycliff’s proposed language.

Uncompensated Curtailment

The main dispute in the section detailing uncompensated curtailment deals with whether or not NorthWestern should be allowed to curtail Greycliff energy during light loading periods without compensation. Greycliff also adds language to their proposed contract that would require NorthWestern to pay for power Greycliff would have delivered if an outage is caused by NorthWestern's negligence. *Id.* 29-30.

See prior recommendation; curtailment during light loading periods should not be permitted unless Greycliff output is contributing to a system emergency during such periods.

Network Upgrade Costs (Section 4.3)

NorthWestern states that a QF is "legally responsible for payment of both interconnection network upgrade costs and transmission service upgrade costs." NWE Post-H'rg Br. 28. Greycliff's language proposes to reimburse NorthWestern for costs consistent with the Large Generator Interconnection Agreement, but NorthWestern states that agreement only reimburses interconnection network upgrade costs and not transmission service costs.

FERC Order 69 directs that utilities cannot discriminate with respect to interconnection costs. Staff recommends that transmission network upgrade costs should be treated the same as transmission interconnection network upgrade costs. The QF should be responsible for any costs that exceed costs that NorthWestern would otherwise incur but for purchases from the QF. Similar to interconnection upgrade costs, NorthWestern has not shown what transmission service upgrade costs it would otherwise incur.

PURPA Repeal (Section 8.5)

Greycliff proposes language that would prevent the termination of the contract, even if PURPA is repealed at some point after the contract is executed. NorthWestern proposes that the Commission would have authority to amend or terminate the contract if PURPA is repealed or amended. Greycliff argues that since PURPA is a federal regulation, only Congress can retroactively repeal or amend the law, not the Commission.

Staff sees no compelling reason to include any reference in the contract to the repeal or amendment of PURPA.