



414 Nicollet Mall
Minneapolis, Minnesota 55401

September 30, 2022

— Via Electronic Filing —

Steve Kahl, Executive Secretary
North Dakota Public Service Commission
State Capitol, 600 East Boulevard
Bismarck, ND 58505-0480

**Re: October 2022 Fuel Cost Rider Rates
Case No. PU-22-012**

Dear Mr. Kahl:

Northern States Power Company, doing business as Xcel Energy and operating in North Dakota, hereby submits its electric Fuel Cost Rider (FCR) rates for October 2022.

The table below shows the FCR rates by customer class:

October 2022	FCR rate/kWh
Residential	\$0.03530
C & I Non-Demand	\$0.03542
C & I Demand	\$0.03521
C & I Demand Time of Day (On-Peak)	\$0.04260
C & I Demand Time of Day (Off-Peak)	\$0.02935
Outdoor Lighting	\$0.02732

See Attachment A for the supporting calculations of these rates.

Pursuant to Commission authorization of the final compliance tariffs in the Company's 2020 rate proceeding (Case No. PU-20-441), new base rates were implemented on October 1, 2021. The new Service Category Ratios listed below became effective when actual October

2021 fuel and purchased energy costs were first passed through in December 2021 FCR rates:

Service Category Ratios	Effective Oct 1 2021
Residential	1.0094
C & I Non-Demand	1.0129
C & I Demand	1.0069
C & I Demand Time of Day (On-Peak)	1.2181
C & I Demand Time of Day (Off-Peak)	0.8392
Outdoor Lighting	0.7813

MID-CONTINENT INDEPENDENT SYSTEM OPERATOR (MISO) CHARGES

Day 2 Market

Pursuant to the Commission’s Orders in Case Nos. PU-05-147 and PU-07-776, Xcel Energy is authorized to recover MISO Day 2 costs in the FCR. The current FCR rates reflect MISO Day 2 charge types including three Auction Revenue Rights (ARR) and three Financial Transmission Rights (FTR) charge types.¹ Consistent with these Orders and the required “net” accounting of MISO Day 2 costs and revenues, we have included in the October FCR the net MISO Day 2 costs for August as recorded in Account 555. The MISO Day 2 cost recovery included in this month’s FCR is \$18,670,157 which is the net of many items. Pursuant to the above-mentioned Orders, the Company also provides more detailed information in Attachment C of this filing to support the calculation of the MISO Day 2 costs.

Ancillary Services Market (ASM)

With the implementation of the MISO ASM on January 6, 2009, the net costs or revenues of 14 ASM charge types are included in the FCR, pursuant to Commission guidance in Case No. PU-09-016. Consistent with the MISO Order and the required “net” accounting of ASM costs and revenues, we reflect in the October FCR rates the net MISO ASM costs for August as recorded in Account 555. The MISO ASM cost recovery included in this month’s FCR is \$7,644,220, which is the net of many items. The detailed records are contained in Attachment C.

¹ Previously embedded in other FTR charge types.

CUSTOMER REFUNDS AND CREDITS

Asset Based Margins

Under the terms of the Revised Second Amended Settlement adopted by the Commission on February 26, 2014 (retroactive to January 1, 2014), the Company began passing through to North Dakota customers 100 percent of wholesale asset-based margins.² Pursuant to the Commission's August 18, 2021 Order Accepting Settlement (Case No. PU-20-441), credits derived from any disallowed resources (Company-owned or power purchase agreements) after January 1, 2021 are excluded from this sharing. Because of the nature of the calculation, the adjustment to remove the margins will only be done once the MISO S105 settlements are complete. Margins of \$3,638,868 have been included as an offsetting credit in this month's FCR. See Attachments B and F.

Non-Asset Based Margins

Beginning in February 2011, 50% of the prior year retail share of Non-Asset Based Margins is credited to North Dakota customers via the March FCR. The North Dakota retail share of the 2021 Non-Asset Based Margin credit amount is \$874,723.³ With the prior month true up the total applicable amount to the October FCR is \$208,741. See Attachments B and F.

Sales of Renewable Energy Credits (RECs)

Pursuant to the Commission Order in Case No. PU-10-19, the Company was authorized to sell excess Renewable Energy Credits (RECs) allocable to our North Dakota jurisdiction and credit 90 percent of the North Dakota jurisdictional share of net proceeds generated by the sale back to customers through the FCR. Under the Commission's February 26, 2014 Order Adopting Settlement, the share of the net proceeds to customers was increased to 100 percent. Pursuant to the Commission's August 18, 2021 Order Accepting Settlement (Case No. PU-20-441), credits derived from any disallowed resources or power purchase agreements after January 1, 2021 are excluded from this sharing. This change will be implemented in a future monthly FCR filing when the sale of disputed resource RECs takes place. With the prior month true up, the REC sales credit for the current reporting period is \$103,650. See Attachments B and F.

PURCHASED POWER AGREEMENT (PPA) COST RECOVERY REVIEW

Pursuant to the Commission's February 26, 2014 Order Adopting Settlement, the following procedural changes reflected in the Revised Second Amended Settlement were made to provide additional transparency regarding cost recovery of renewable energy projects or purchases:

² Case Nos. PU-12-813, PU-13-706, PU-13-707, PU-13-708, PU-13-742, PU-13-743, PU-13-194, PU-13-195

³ Due to high credit amount in 2021, the Non-Asset Based Margin sharing credit was refunded over March 2022 and April 2022 FCR (\$437,362 each month).

- The Company will notify the Commission in its monthly FCR filings of any new renewable projects, qualifying in part or whole for FCR cost recovery, whose costs are included in the calculation of FCR rates;
- The Company will file an annual summary listing the new resources that have been included in the FCR during the previous calendar year;
- If, within 6 months of the filing of the annual summary, the Commission does not initiate a review of the new PPA(s) listed, the Company will be allowed to recover the related costs for the duration of the contract(s); and
- Renewable energy resources or purchases with FCR-qualifying costs that are 50 MW or larger in size (nameplate capacity) will not be included in the FCR unless and until the Commission has granted an Advance Determination of Prudence (ADP) for the resource.

The following PPAs have been excluded from the FCR as a result of Commission review and disapproval:

1. School Sisters of Notre Dame (0.8 MW)⁴
2. Marshall Solar LLC (62.25 MW)⁵
3. North Star Solar PV (100 MW)⁶
4. Aurora Distributed Solar (100 MW)⁷

It should be noted that MISO market energy purchases are not subject to the above requirements.

NEGOTIATED AGREEMENT PURCHASED POWER AGREEMENT EXCLUSIONS

Pursuant to the Commission's March 9, 2016 Order Accepting the Negotiated Agreement (Case Nos. PU-12-813, *et. al.*), the costs and volumes of 15 Community-Based Energy Development (C-BED) and two solar PPAs are to be excluded from the calculation of the Company's monthly FCR rates. Dragonfly Solar PPA was added to the exclusion list in September 2018 (see table below). The Company completed the closing process for the acquisition of the Jeffers and Community Wind North projects from Longroad Energy effective December 31, 2020. The PPAs with Jeffers Wind 20 LLC, North Community Turbines LLC and North Wind Turbines LLC were terminated effective December 31, 2020.

⁴ Case No. PU-16-458, ORDER REGARDING 2015 POWER PURCHASE AGREEMENT COSTS, October 5, 2016.

⁵ The 62.25 MW Marshall Solar project is one of the three projects in the Company's proposed 187 MW solar energy portfolio that was not approved by the Commission (Case No. PU-14-810).

⁶ The 100 MW North Star Solar project is one of the three projects in the Company's proposed 187 MW solar energy portfolio that was not approved by the Commission (Case No. PU-14-810).

⁷ The Company's application for an advance determination of prudence for the proposed 100 MW Aurora Distributed Solar project was denied (Case No. PU-15-95).

1. Jeffers Wind 20, LLC (50 MW) *	10. North Wind Turbines (15 MW) *
2. Big Blue (36 MW)	11. Valley View Transmission (10 MW)
3. Community Wind South (Zephyr) (30 MW)	12. Ulk Wind Farm (4.5 MW)
4. Ridgewind Power Partners LLC (25 MW)	13. Hilltop Power (2 MW)
5. Adams Wind Generations (20 MW)	14. Winona County Wind (1.5 MW)
6. Danielson Wind Farms (20 MW)	15. Woodstock Municipal Wind, LLC (0.8 MW)
7. Ewington Energy Systems LLC (20 MW)	16. Outland Solar (2 MW)
8. Grant County Wind, LLC (20 MW)	17. Best Power (St. Johns Solar) (0.4 MW)
9. North Community Turbines (15 MW) *	18. Dragonfly Solar, LLC (0.8 MW)

See Attachment D for more details concerning the calculation of the replacement energy costs (i.e., the system average) used to effectuate the impact of disallowing these resources.

NSP-OWNED WIND RESOURCE PRICING ADJUSTMENT

Pursuant to the Commission’s August 18, 2021 Order Accepting Settlement (Case No. PU-20-441), the Company owned Community Wind North and Jeffers wind facilities are repriced at average system cost and recovered in the monthly FCR charge. The effect of the repricing is included in Attachment D.

MISO Revenue Exclusion for Disputed Resources

Pursuant to the Commission’s August 18, 2021 Order Accepting Settlement (Case No. PU-20-441), the MISO wholesale revenues of disputed resources are excluded from the calculation of the Company’s monthly FCR after January 1, 2021. The August system amount is \$5,359,014 as shown on line 12 of Attachment B.

COMMUNITY SOLAR GARDENS COST TREATMENT

In our response to NDPSC Staff Data Request No. 1 submitted in Case No. PU-17-12 on August 23, 2017, the Company committed to including additional information in our FCR filings regarding the costs related to the Minnesota Community Solar Gardens (CSG) program production and cost assignment to North Dakota. As shown on Attachment H, North Dakota customers do not pay the actual costs of CSG production but are instead allocated a portion of the “market” costs for the same energy produced by the CSG program. As a result, North Dakota customers are insulated from all CSG costs.

BIOMASS PPA TERMINATION COST RECOVERY

Pursuant to the Commission’s June 27, 2018 Orders in Case No. PU-17-270 (ADP – Benson, Pine Bend, and Hennepin Energy Recovery Center (HERC) PPA terminations), Case No. PU-17-271 (Deferred Accounting for Benson, Pine Bend, and HERC PPA termination), and Case No. PU-17-322 (Deferred Accounting for Laurentian PPA terminations), this month’s FCR includes \$52,552 in termination cost recovery. The itemized cost recovery information is found in Attachment F.

MONTHLY FCR RATE CALCULATION AND SUPPORTING DOCUMENTS

This filing includes the following supporting documents:

- Attachment A – Summary of Monthly FCR Rate Calculation
- Attachment B – Four Month Fuel Cost Rider Costs
- Attachment C – MISO Day 2 and ASM Settlement Charges
- Attachment D – Replacement Costs for Disallowed Resources and Residential Bill Impact
- Attachment E – FCR True-Up Adjustment
- Attachment F – Credits and Other Adjustment Included in the FCR
- Attachment G – Historical Trend of FCR Charges (Residential)
- Attachment H – Community Solar Garden Costs Allocated to North Dakota FCA

If you have any questions regarding the information contained in this filing, please contact Chris Shaw at 612-330-7974 or Christopher.J.Shaw@xcelenergy.com.

Sincerely,

/ s /

LISA PETERSON
DIRECTOR, REGULATORY PRICING & ANALYSIS

cc: Christopher J. Shaw

Enclosures

Summary of Fuel Cost Rider Rates - October 2022

System Fuel and Purchased Energy Costs

	<u>4 Month Total</u>	
1 NSP System Fuel/Energy Costs (Retail)	\$393,762,140	Att B, p. 1, line 6
2 MISO Charges	\$110,068,031	Att B, p. 1, line 10
3 Disallowed Resource Costs	<u>\$5,817,934</u>	Att B, p. 1, line 14
4 Net NSP System Costs	<u>\$509,648,105</u>	

ND Fuel and Purchased Energy Costs

	<u>4 Month Total</u>	
5 NSP System MWh Sales (Retail)	13,731,433	Att B, p. 1, line 16
6 Average NSP System Cost per kWh	3.712¢	line 4 / line 5/10
7 ND MWh Sales (Retail)	<u>694,736</u>	Att B, p. 1, line 18
8 ND Fuel & Purchased Energy Costs	<u>\$25,785,537</u>	line 6 x line 7*10

Credits and Other Adjustments Applicable to ND

	<u>August 2022</u>	
9 Wholesale Margins Credit	(\$3,847,609)	Att B, p. 1, line 20,21
10 REC Sales Proceeds Credit	(\$103,650)	Att B, p. 1, line 22
11 Biomass PPA Termination Costs	<u>\$52,552</u>	Att B, p. 1, line 23
12 Net Credits and Other	<u>(\$3,898,707)</u>	

Over/Under Recovered Costs

	<u>Amount</u>	
13 True-Up Amount for August 2022	\$2,409,662	Att E, p.1, line 19

ND Net FCR Costs

	<u>4 Month Total</u>	
14 Net FCR Costs	\$24,296,492	line 8+line 12+line 13
15 Net FCR Cost per kWh	3.497¢	line 14 / line 7/10

Fuel Cost Rider Rate By Class

	Customer Class	ND Cost of Fuel/kWh	Cust. Class Ratio ¹	FCR Rate
16	Residential	3.497¢	1.0094	3.530¢
17	C & I Non-Demand	3.497¢	1.0129	3.542¢
18	C & I Demand Non-TOD	3.497¢	1.0069	3.521¢
19	C & I Demand TOD On-Peak	3.497¢	1.2181	4.260¢
20	C & I Demand TOD Off-Peak	3.497¢	0.8392	2.935¢
21	Outdoor Lighting	3.497¢	0.7813	2.732¢

¹ See Fuel Cost Rider Tariff.

4 Month Fuel Cost Rider Costs - October 2022

	(A)	(B)	(C)	(D)	(E)
Fuel & Purchased Energy Costs	May-22	Jun-22	Jul-22	Aug-22	4 Month Total
1 Account 151 - Fossil Fuel	\$22,714,841	\$54,982,887	\$68,323,095	\$73,463,734	\$219,484,557
2 Account 518 - Nuclear Fuel	\$10,135,965	\$10,018,322	\$10,345,091	\$10,336,403	\$40,835,781
3 Account 555 - Purchased Power ¹	\$75,664,147	\$95,814,218	\$83,848,820	\$88,787,006	\$344,114,191
4 Sub-Total NSP Sys Energy Costs	\$108,514,953	\$160,815,427	\$162,517,006	\$172,587,143	\$604,434,529
5 Exclude Costs of InterSystem Sales	(\$25,019,218)	(\$63,874,805)	(\$62,131,004)	(\$59,647,362)	(\$210,672,389)
6 Total Sys Fuel & Purch Energy	\$83,495,735	\$96,940,622	\$100,386,002	\$112,939,781	\$393,762,140

MISO Charges					
7 Day 2 Market	\$29,270,075	\$22,047,589	\$14,815,249	\$18,781,149	\$84,914,062
8 Exclude Schedule 24	(\$98,137)	(\$87,329)	(\$90,673)	(\$110,992)	(\$387,131)
9 Ancillary Services Market	\$880,963	\$6,609,926	\$10,405,991	\$7,644,220	\$25,541,100
10 Total MISO Charges	\$30,052,901	\$28,570,186	\$25,130,567	\$26,314,377	\$110,068,031

Disallowed Resources Costs²					
11 Exclude Costs of Disallowed PPAs	(\$6,618,281)	(\$7,500,833)	(\$6,898,358)	(\$6,161,093)	(\$27,178,565)
12 Exclude MISO Revenues	\$3,006,358	\$4,457,428	\$4,312,043	\$5,359,014	\$17,134,843
13 Replacement Energy Costs	\$4,384,008	\$4,538,544	\$3,527,700	\$3,411,404	\$15,861,656
14 Net Disallowance	\$772,085	\$1,495,139	\$941,385	\$2,609,325	\$5,817,934

15 Net NSP System Costs	\$114,320,721	\$127,005,947	\$126,457,954	\$141,863,483	\$509,648,105
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ND Fuel and Purchased Energy Costs	May-22	Jun-22	Jul-22	Aug-22	4 Month Total
16 NSP System Sales (Retail)	2,859,761	3,267,440	3,709,097	3,895,135	13,731,433
17 Avg. NSP System Cost per kWh	3.998¢	3.887¢	3.409¢	3.642¢	3.712¢
18 ND Sales (Retail)	153,240	172,495	176,466	192,538	694,739
19 ND Fuel & Purchased Energy Costs	\$6,126,535	\$6,704,881	\$6,015,726	\$7,012,234	\$25,785,537

Other Adjustments and True-Up					
20 Asset-Based Margins	(\$2,241,113)	(\$3,303,451)	(\$2,381,126)	(\$3,638,868)	(\$11,564,558)
21 Non-Asset-Based Margins	(\$281,596)	(\$282,290)	(\$210,587)	(\$208,741)	(\$983,214)
22 REC Sales Proceeds (100%)	(\$1,567,888)	(\$110,797)	(\$1,146,448)	(\$103,650)	(\$2,928,783)
23 Biomass PPA Termination Costs ³	\$53,000	\$1,007,507	\$52,702	\$52,552	\$1,165,762
24 Net Credits and Other	(\$4,037,597)	(\$2,689,031)	(\$3,685,459)	(\$3,898,707)	(\$14,310,793)

¹ Excludes demand-related expenses, MN Windsource energy costs, and MN Solar Gardens energy costs. June amount includes -\$136,225 prior period adjustment.

² Excludes costs exceeding average system costs for 21 wind and solar PPAs pursuant to March 9, 2016 Order Approving Settlement (PU-12-813) & other dockets (Dragonfly Solar). Includes Company owned Jeffers Wind and Community Wind North costs where replacement costs are repriced based on based average system cost.

³ Benson, Laurentian and Pine Bend PPAs.

MISO Day 2 Settlement Charges - October 2022

		Retail
	<u>FERC Account</u>	<u>Expense (Rev)</u>
Energy and Losses		
1 Day Ahead Asset Energy - Energy	555	\$19,978,243
2 Day Ahead Asset Energy - Losses	555	\$10,998,863
3 Day Ahead Financial Bilateral Transaction Loss	555	(\$10,997)
4 Day Ahead Non-Asset Energy - Energy	555	(\$29,633,438)
5 Day Ahead Non-Asset Energy - Losses	555	\$3,340,161
6 Day Ahead Losses Rebate on Carve-out Grandfathered Agreements	555	\$10,997
7 Day Ahead Losses Rebate on Option B Grandfathered Agreements	555	\$0
8 Real Time Asset Energy - Energy	555	\$6,499,781
9 Real Time Asset Energy - Losses	555	\$267,340
10 Real Time Distribution of Losses	555	(\$3,520,667)
11 Real Time Financial Bilateral Transaction - Losses	555	\$14,608
12 Real Time Losses Rebate on Carve-out Grandfathered Agreements	555	\$0
13 Real Time Net Inadvertent Distribution	555	\$91,273
14 Real Time Non-Asset Energy - Energy	555	\$77,270
15 Real Time Non-Asset Energy - Losses	555	(\$12)
16 Total Energy and Losses		<u><u>\$8,113,422</u></u>
Congestion		
17 Day Ahead Asset Energy - Congestion	555	\$36,113,942
18 Day Ahead Financial Bilateral Transaction - Congestion	555	(\$40,304)
19 Day Ahead Non-Asset Energy - Congestion	555	\$5,436,863
20 Day Ahead Congestion Rebate - Carve-out Grandfather Agreements	555	\$40,304
21 Day Ahead Congestion Rebate - Option B Grandfather Agreements	555	\$0
22 Real Time Asset Energy - Congestion	555	\$464,871
23 Real Time Financial Bilateral Transaction - Congestion	555	\$0
24 Real Time Congestion Rebate - Carve-out Grandfather Agreements	555	\$0
25 Real Time Non-Asset Energy - Congestion	555	(\$0)
26 Total Congestion-Related		<u><u>\$42,015,676</u></u>
Financial Transmission Rights (FTR)		
27 FTR Hourly Allocation	555	(\$31,643,701)
28 FTR Monthly Allocation	555	(\$676,847)
29 FTR Transaction	555	\$0
30 FTR Yearly Allocation	555	\$0
31 FTR Full Funding Guarantee	555	(\$749,904)
32 FTR Guarantee Uplift	555	\$744,018
33 FTR Monthly Transaction	555	\$0
34 Total Financial Transmission Rights Charges		<u><u>(\$32,326,435)</u></u>

MISO Day 2 Settlement Charges - October 2022

	<u>FERC Account</u>	<u>Retail Expense (Rev)</u>
Uplift		
35 Real-Time Revenue Neutrality Uplift	555	\$159,335
36 Total Uplift		<u>\$159,335</u>
Revenue Sufficiency Guarantee (RSG)		
37 Day Ahead RSG Distribution	555	\$209,847
38 Day Ahead RSG Make Whole Payment	555	(\$89,519)
39 Real time RSG First Pass Distribution	555	\$684,416
40 Real Time RSG Make Whole Payment	555	(\$371,547)
41 Real Time Price Volatility Make Whole Payment	555	(\$112,320)
42 Total Revenue Sufficiency Guarantee	555	<u>\$320,877</u>
Market Administration¹		
43 Day Ahead Market Administration	575.7	\$551,895
44 Real Time Market Administration	575.7	\$49,597
45 FTR Market Administration	575.7	\$97,297
46 Total Market Administration		<u>\$698,789</u>
Virtual Energy		
47 Day Ahead Virtual Energy	555	\$0
48 Real Time Virtual Energy	555	\$0
49 Total Virtual Energy	555	<u>\$0</u>
Auction Revenue Rights (ARR)		
50 ARR FTR Auction Transactions	555	\$14,246,626
51 ARR Monthly Revenue	555	(\$14,207,173)
52 ARR Stage 2 Distribution	555	(\$605,337)
53 ARR Monthly Infeasible Revenue	555	\$97,657
54 Total Auction Revenue Rights		<u>(\$468,227)</u>
Other Miscellaneous		
55 Real Time Miscellaneous	555	\$156,718
56 Real Time Uninstructed Deviation	555	\$0
57 Total Other Miscellaneous		<u>\$156,718</u>
58 Total MISO Day 2 Charges		<u><u>\$18,670,157</u></u>

¹ Excludes Schedule 24 costs, which are recovered in base rates.

MISO Ancillary Services Markets (ASM) Charges - October 2022

	<u>FERC Account</u>	<u>Retail Expense (Rev)</u>
Procurement		
1 Day Ahead Regulation	555	(\$253,746)
2 Day Ahead Spinning Reserve	555	(\$155,482)
3 Day Ahead Supplemental Reserve	555	(\$64,152)
4 Real Time Regulation	555	\$33,999
5 Real Time Spinning Reserve	555	\$147,459
6 Real Time Supplemental Reserve	555	\$57,543
7 Total Procurement		<u><u>(\$234,380)</u></u>
Resource Energy		
8 Real Time Excessive Energy	555	(\$42,689)
9 Real Time Excessive Energy - Congestion	555	\$0
10 Real Time Excessive Energy - Losses	555	\$0
11 Real Time Non-Excessive Energy	555	\$8,940,025
12 Real Time Non-Excessive Energy - Congestion	555	(\$1,218,424)
13 Real Time Non-Excessive Energy - Losses	555	(\$313,578)
14 Real Time Net Regulation Adjustment	555	(\$20,416)
15 Total Resource Energy		<u><u>\$7,344,918</u></u>
Cost Distribution		
16 Real Time Regulation Reserve Cost Distribution	555	\$162,246
17 Real Time Spinning Reserve Cost Distribution	555	\$151,470
18 Real Time Supplemental Reserve Cost Distribution	555	\$22,396
19 Total Cost Distribution		<u><u>\$336,112</u></u>
Penalties		
20 Real Time Excessive/Deficient Energy Deployment	555	\$37,835
21 Real Time Contingency Reserve Deployment Failure	555	\$159,736
22 Total Penalties		<u><u>\$197,570</u></u>
23 Grand Total ASM Charges²		<u><u>\$7,644,220</u></u>

² Included new MISO ASM charges:
DA Short Term Reserve Amount
RT Short Term Reserve Amount
RT Short Term Reserve Distribution Amount
Short Term Reserve Deployment Failure Charge
Short Term Reserve Procurement
RT ST Reserve Gen Alloc Reclass

Derivation of August 2022 Replacement Costs for Disallowed Resources & Residential Bill Impact

	NSP System	ND Allocation ¹	ND Jurisdiction	
Fuel & Purchased Energy Costs				
1 Fuel & Purch Energy Costs (Retail) ²	\$139,254,159	4.9430%	\$6,883,386	
Disallowed PPA Costs				
2 Disallowed C-BED Wind PPAs ³	(\$1,819,737)	4.9430%	(\$89,950)	
3 Disallowed Solar PPAs	(\$4,255,012)	4.9430%	(\$210,327)	
4 Curtailment Payments	(\$86,344)	4.9430%	(\$4,268)	
5 Total Exclusion	(\$6,161,093)		(\$304,545)	Line 2 +Line 3+Line 4
6 Adjusted Fuel & Purchased Energy Costs	\$133,093,066	4.9430%	\$6,578,841	Line 1 - line 5
Energy Sales (Billing Mo.)				
7 MWh Energy Sales	3,895,135	4.9430%	192,538	[b]=[c]/[a]
8 Disallowed Resources MWh Energy Sales	93,668	4.9430%	4,630	
9 Adjusted MWh Sales (Billing Mo.)	3,801,467		187,908	
Replacement Costs				
10 Avg. Sys. Cost w/o Disallowed Resources (\$/MWh)	\$35.01		\$35.01	Line 6 / line 9
11 Replacement Cost for Disallowed Resources ⁴	(\$3,279,332)		(\$162,096)	Line 8 x line 10
12 Adjusted Fuel & Purch Energy Costs (Retail)	\$133,093,066	4.9430%	\$6,578,841	Line 6
13 Exclude MISO Revenues (Includes Jeffers & Community Wind North)	\$5,359,014	4.9430%	\$264,898	Att B Line 12
14 Net System Cost Excludes MISO Revenues	\$138,452,080		6,843,739	Line12 + Line 13
15 Adjusted MWH Sales (Billing Mo.)	3,801,467		187,908	Line 9
16 Adjusted Average System Cost (\$/MWh)	\$36.42		\$36.42	Line 14/Line 9
17 Net Replacement Cost	\$3,411,404		\$168,625	Line 16 * Line 8
ND Residential Bill Impact				
18 Cost Exclusion	(\$6,161,093)		(\$304,545)	Line 5
19 Exclude MISO Revenues	\$5,359,014		\$264,898	Line 13
20 Net Replacement Costs	\$3,411,404		\$168,625	Line 17
21 Net Impact of Disallowance and Repricing	\$2,609,325		\$128,978	Line 18+Line 19+line 20
22 FCR Impact of Disallowance & Repricing/kWh			0.067¢	Line 21 / line 7
23 Residential Monthly Bill Impact (750 kWh)			\$0.50	Line 22 x 750

¹ Based on ratio of ND billed energy sales to NSP System billed sales as shown in line 7

² Cost before disallowed resources excluded and includes MISO charges.

³ Originally 15 C-BED PPAs. Two of the C-BED PPAs, Jeffers Wind and Community Wind North, became Company owned facilities in January 2021.

⁴ Reflects the average system fuel and purchased energy cost per kWh (excluding the disallowed PPAs, Jeffers and Community Wind North costs and volumes) applied to the energy volumes of the disallowed PPAs.

Derivation of FCR True-Up Adjustment - August 2022

Cost to Recover in August 2022

	[a] Aug Sys Fuel <u>Cost/kWh¹</u>	[b] Aug ND <u>MWh Sales²</u>	<u>Amount</u>	
1 Fuel & Purchased Energy Costs	3.642¢	192,538	\$7,012,235	
2 True Up Amount for June 2022			\$2,857,893	
3 Net Costs			<u>\$9,870,128</u>	Line 1 + Line 2

Cost Recovered in August 2022

	<u>Sales</u>	<u>Amount</u>	
<u>Fuel & Purchased Energy</u>			
4 (i) Residential	67,323	\$2,391,553	
5 (ii) C & I Non-Demand	7,778	\$275,860	
6 (iii) C & I Demand Non-TOD	65,199	\$2,298,032	
7 (iv) C & I Demand TOD On-Peak	20,176	\$861,778	
8 (v) C & I Demand TOD Off-Peak	31,061	\$913,802	
9 (vi) Outdoor Lighting	1,001	\$27,303	
10 Total	<u>192,538</u>	<u>\$6,768,328</u>	
<u>True-Up Obligation</u>			
11 (i) Residential	67,323	\$248,778	
12 (ii) C & I Non-Demand	7,778	\$27,957	
13 (iii) C & I Demand Non-TOD	65,199	\$232,243	
14 (iv) C & I Demand TOD On-Peak	20,176	\$87,568	
15 (v) C & I Demand TOD Off-Peak	31,061	\$92,826	
16 (vi) Outdoor Lighting	1,001	\$2,766	
17 Total	<u>192,538</u>	<u>\$692,138</u>	
18 Net Recovery		<u>\$7,460,466</u>	Line 10 + Line 17

Over/Under Recovered Costs

19 True-Up Amount for August 2022	<u>\$2,409,662</u>	Line 3 - Line 18
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¹ Reflects the average for the month of August 2022.

² June replacement cost adjustment

Summary of Credits and Other Adjustments Included in the FCR by Month

Margin Sharing and REC Sales Credits in Monthly FCR

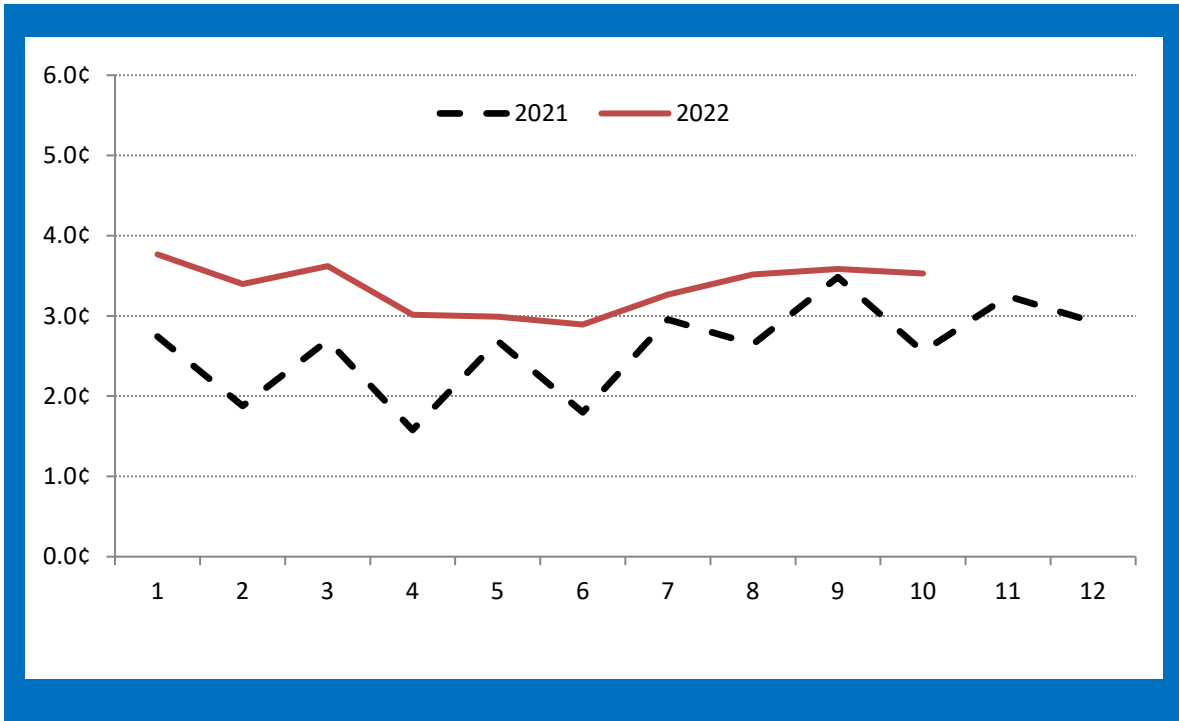
Month	Asset Based Margins	Non-Asset Based Margins		Renewable Energy Credits	Total
1 January	(\$2,244,095)	(\$489,863)		(\$412,991)	(\$3,146,949)
2 February	(\$2,838,734)	(\$446,557)		(\$166,646)	(\$3,451,938)
3 March	(\$2,085,963)	(\$350,990)		(\$291,109)	(\$2,728,062)
4 April	(\$2,817,963)	(\$358,847)		(\$138,562)	(\$3,315,372)
5 May	(\$2,241,113)	(\$281,596)		(\$1,567,888)	(\$4,090,597)
6 June	(\$3,303,451)	(\$282,290)		(\$110,797)	(\$3,696,538)
7 July	(\$2,381,126)	(\$210,587)		(\$1,146,448)	(\$3,738,161)
8 August	(\$3,638,868)	(\$208,741)		(\$103,650)	(\$3,951,259)
9 September					
10 October					
11 November					
12 December					
13 Total	(\$21,551,314)	(\$2,629,471)		(\$3,938,091)	(\$28,118,875)

Biomass Contracts Termination Cost Recovery in Monthly FCR

Month	Benson Amortization (Regulatory Asset)	Benson Amortization (Plant Impairment)	Benson ROE (Regulatory Asset)	Benson ROE (Plant Impairment)	Laurentian Payment	Pine Bend Payment	Total
	FERC 557	FERC 407	FERC 182.2	FERC 182.3			
14 January	\$19,946	\$22,387	\$5,277	\$6,015	\$0	\$0	\$53,624
15 February	\$19,946	\$22,387	\$5,207	\$5,938	\$0	\$0	\$53,477
16 March	\$19,946	\$22,387	\$5,138	\$5,829	\$0	\$0	\$53,299
17 April	\$19,946	\$22,387	\$5,068	\$5,749	\$0	\$0	\$53,149
18 May	\$19,946	\$22,387	\$4,998	\$5,670	\$0	\$0	\$53,000
19 June	\$19,946	\$22,386	\$4,928	\$5,591	\$954,657	\$0	\$1,007,507
20 July	\$19,946	\$22,386	\$4,858	\$5,512	\$0	\$0	\$52,702
21 August	\$19,946	\$22,386	\$4,788	\$5,432	\$0	\$0	\$52,552
22 September							
23 October							
24 November							
25 December							
26 Total	\$159,567	\$179,090	\$40,262	\$45,736	\$954,657	\$0	\$1,379,312

Pine Bend PPA termination cost recovery was completed in the May 2020 FCR.

Historical Trend of FCR Charges (Residential)



Residential Fuel Cost Charges				
	<u>2021</u>	<u>Bill Impact¹</u>	<u>2022</u>	<u>Bill Impact¹</u>
1 January	2.742¢	\$20.57	3.767¢	\$28.25
2 February	1.878¢	\$14.09	3.399¢	\$25.49
3 March	2.694¢	\$20.21	3.623¢	\$27.17
4 April	1.579¢	\$11.84	3.013¢	\$22.60
5 May	2.688¢	\$20.16	2.992¢	\$22.44
6 June	1.797¢	\$13.48	2.893¢	\$21.70
7 July	2.955¢	\$22.16	3.268¢	\$24.51
8 August	2.648¢	\$19.86	3.518¢	\$26.39
9 September	3.484¢	\$26.13	3.585¢	\$26.89
10 October	2.555¢	\$19.16	3.530¢	\$26.48
11 November	3.246¢	\$24.35		
12 December	<u>2.927¢</u>	<u>\$21.95</u>		
13 Average	2.599¢	\$19.50	3.359¢	\$25.19

¹ For non-electric heating residential customers using 750 kWh

