



30 West Superior Street
Duluth, MN 55802-2093
www.mnpower.com



May 11, 2023

VIA E-FILING

Will Seuffert
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, MN 55101-2147

Re: **In the Matter of Minnesota Power's Petition for Approval of the Annual
Forecast of Automatic Adjustment Charges for the period of
January 2022 through December 2022
Docket No. E015/AA-21-312
Reply Comments**

Dear Mr. Seuffert:

Minnesota Power respectfully submits these Reply Comments in response to the Initial Comments submitted by the Minnesota Department of Commerce, Division of Energy Resources, and Stoel Rives on behalf of the Large Power Intervenors, in the above referenced Docket.

Please contact me at (218) 355-3455 or hcreurer@allete.com if you have any questions regarding this filing.

Kind Regards,

Hillary A. Creurer
Regulatory Compliance Administrator

HAC:th
Attach.

**STATE OF MINNESOTA
BEFORE THE
MINNESOTA PUBLIC UTILITIES COMMISSION**

In the Matter of Minnesota Power's Petition for
Approval of the Annual Automatic Adjustment Charges
for the period of January 2022 through December 2022

Docket No. E015/AA-21-312
**MINNESOTA POWER'S
2022 FPE TRUE UP
REPLY COMMENTS**

I. INTRODUCTION

On April 14, 2023, the Minnesota Department of Commerce, Division of Energy Resources ("Department") submitted its Comments in the above-referenced Docket and requested Minnesota Power (or the "Company") update the Generation Maintenance Expense based on the approved 2021 General Rate Case¹.

On April 17, 2023, Stoel Rives submitted comments on behalf of the Large Power Intervenors ("LPI") requesting the Company provide updated customer class rate information² and provide additional information pertaining to increase market pricing in 2022.

On April 20, 2023, Minnesota Power requested a 10-day extension to allow sufficient time to address the requested information. On April 21, 2023, the Commission issued a Notice of Extended Reply and Response Comment Period.

In these Reply Comments, Minnesota Power provides responses to the requested information.

¹ In the Matter of the Application by Minnesota Power for Authority to Increase Rates for Electric Utility Service in Minnesota, in Docket No. E015/GR-21-335.

² LPI Information Request No. 5000, in Docket No. E015/GR-21-335.

II. RESPONSES TO REQUESTED INFORMATION

A. Generation Maintenance Expense

The Department requested that Minnesota Power provide the approved generation maintenance expense from its new rate case in Docket No. E015/GR-21-335, as well as the actual 2022 generation maintenance expense for the Minnesota Jurisdiction.

Minnesota Power has updated Attachment 10, which includes the generation maintenance expense information requested. It is important to note that the data shown under the Commission Decision column, in the updated attachment, is not considered final approved until after all compliance filings have been submitted in the rate case.

B. General Rate Case (E015/GR-21-335) – Information Request 5000 Update

LPI requested that Minnesota Power update the LPI IR 5000 with 2022 actuals, updated 2023 information, and current 2024 forecasts inclusive of base rates, riders, FCA charges, etc. In addition, LPI requested that the level of detail show how each item contributes to the total.

Table 2(b) from LPI IR 5000 has been updated as attached with actual 2021 and 2022 average rates and expected 2023 and 2024 average rates as requested. Additionally, Section B Attachment provides the component parts of the average rates shown in Table 2(b). Please note that the \$31.91/MWh referenced in LPI's Comment's is the 2022 Actual Average Cost of Fuel. Table 2(b) and Section B Attachment are updated with actual FPE billing factors as allocated using the E8760 allocator. For example, the 2022 FPE billing factor of \$33.98/MWh for Large Power is the annual average of the actual monthly FPE billing factors from the 2022 Updated Forecast with 2021 True-up as implemented.

C. Economic Dispatch

LPI requested that Minnesota Power address how the decision to move baseload generation to seasonal / economic dispatch has exposed the Company to the market to a greater degree.

In 2021, Minnesota Power successfully transitioned Boswell Unit 3 to economic dispatch. During 2022, Boswell Unit 3 was consistently dispatched by MISO, due to the strong energy markets. Currently with the transition there has not been a significant increased market exposure; however, as market prices begin to soften and are closer to the dispatch price for Boswell Unit 3, the Company could experience periods of time where MISO does not dispatch the unit and therefore, could have increased exposure to the market.

D. Impacts from Integrated Resource Plan (“IRP”)

LPI requested that Minnesota Power provide additional information on if/how the short- and long-term action plans approved in the Company’s recent IRP impacted market exposure in 2022 or will impact market exposure in 2023 and beyond.

Our transition away from fossil fuel generation has been done carefully and thoughtfully to ensure a reasonable cost power supply and reliability is maintained for our 7x24 customers. The short-term action plan in the Company’s IRP approved by the Commission did not include any actions that impacted market exposure in 2022. Going forward, Minnesota Power has developed, and the Commission approved, a diverse generation portfolio to decarbonize the company’s power supply that includes Power Purchase Agreements (“PPA”) and owned wind, hydro (including dispatchable), dispatchable gas generation, biomass, and solar that results in a low-cost portfolio for customers. With Minnesota Power’s diverse renewable portfolio, it helps maintain a more consistent production of renewables, and when renewables are unavailable Minnesota Power has a dispatchable generation portfolio and demand response that can be used to fill the gaps. We will continue to keep reliability and market exposure in the forefront as we continue to transform.

E. Existing Demand Response Programs

LPI requested that Minnesota Power provide additional information on how the Company's existing demand response programs mitigate market exposure.

Minnesota Power has the following demand response programs that are used to mitigate market exposure.

- **Dual Fuel** – Dual Fuel is an interruptible discount rate designed primarily for electric heating, which requires a separate meter that can be controlled by Minnesota Power. In exchange for a discounted rate, customers must agree to be interrupted (through a meter that can be interrupted by Minnesota Power), which typically occurs when demand on the electric system is high. Dual Fuel load is interrupted to reduce or mitigate exposure to market purchases from MISO when market costs are high.
- **Incremental Production Service (“IPS”)** – Incremental energy procured by Large Power Customers for service above the IPS threshold established in the Electric Service Agreement. This product also offered the Company a curtailable product in times of high system loads or during concerns of system volatility. Duration and frequency of curtailments are at the sole discretion of the Company and require a 10-minute notice.
- **Released Energy and Voluntary Energy Buyback** – Voluntary Customer products that reduce energy requirements during times when Minnesota Power is purchasing energy to meet firm energy requirements, thereby enabling the avoidance of higher-cost energy purchases.

Minnesota Power also has two Large Light and Power customer programs that include “price recall” energy. Foundry price recall through the Rider for Foundry, Forging and Melting Customers gives the customer the option to curtail their electric usage or pay a higher price based on Minnesota Power's incremental energy cost up to 200 hours per year. The curtailment feature benefits Minnesota Power's system – and, in turn, all customers – by encouraging customers on this rider to reduce load at times of system

peaks or high energy prices. On the other hand, the price recall feature allows the Company to directly charge these customers the high incremental cost during such times if they choose not to curtail their load, rather than spreading this increased cost to all other customers. Additionally, the Rider for General Service and Large Light and Power Interruptible Service includes 100 hours per year of “price recall” energy.

F. Exploring Economic Demand Response or Other Customer Products

LPI’s inquired if the Company was exploring economic demand response or other customer options to help further mitigate market exposure going forward.

In Minnesota Power’s most recent IRP proceeding the Company proposed, and was subsequently ordered, to work collaboratively with customers to pursue up to 50 MW of additional long-term demand response by 2030 to address future resource adequacy changes. Minnesota Power continues to work with its customers to implement new longer-term demand response products to maximize this valuable resource for the region. This would also include exploring economic demand response criteria and options. Lastly, Minnesota Power continually evaluates additional demand response programs through its IRPs, including air conditioning and electric hot water heater cycling programs.

In Minnesota Power’s 2021 Rate Case³ there were also proposals made to several existing economic demand response programs to help mitigate market exposure.

- **Dual Fuel** – Minnesota Power proposed to offer two Dual Fuel rate options with the Dual Fuel Plus option being available for 1,000 hours of interruptions per annual period, with the potential for 20 hours of interruptions per calendar day. By modernizing and offering demand response program options, Minnesota Power expects to retain customers in this program and provide system benefits for all customers.

³ In the Matter of the Application by Minnesota Power for Authority to Increase Rates for Electric Utility Service in Minnesota, in Docket No. E015/GR-21-335.

- **IPS** – The proposed changes to this Rider include expanding the definitions to allow Minnesota Power to have the ability to curtail IPS usage in times of low renewable energy or high market pricing conditions.
- **Released Energy and Voluntary Energy Buyback** – Minnesota Power requested updates to the rider language related to the energy credit for avoided energy purchases to align with MISO requirements for balancing load.

G. Detailed Analysis of why FCA Costs are Increasing

LPI requested an analysis explaining why FCA costs are increasing at a dramatic pace despite the Company's significant lower reliance upon fossil-based fuel generation.

Our transition away from fossil fuel generation has been done carefully and thoughtfully to ensure a reasonable cost power supply and reliability is maintained for our 7x24 customers. Our power supply decisions are prudently vetted by the Minnesota Public Utilities Commission and stakeholders through the IRP process every couple of years. The IRP evaluation takes into consideration Minnesota renewable and carbon reduction goals, environmental cost impacts to residents, rate impacts to customers, and the reliability of the system. Minnesota Power has been executing a well thought out plan to decarbonize our power supply that includes continuing to operate our most efficient coal generation resources (i.e. Boswell Units 3 and 4) to provide low cost power to customers throughout the transition, a diverse renewable portfolio of wind, solar, and hydro that is a mix of owned resources and PPAs, a dispatchable fleet of gas and biomass fired generation, utilization of the MISO market when economical, and efficient use of customer demand response. Minnesota Power's decarbonization plan maintains a consistent production capability where renewables provide low-cost power, and when renewables are unavailable Minnesota Power has a dispatchable generation portfolio and demand response that can be used to economically fill the gaps.

Over the past few years there has been major price volatility in the market. In 2020 market prices averaged [TRADE SECRET DATA BEGINS [REDACTED] TRADE SECRET DATA ENDS] mainly due to the COVID-19 global pandemic. During 2021 extreme

weather events like the polar vortex as well as significant heat and drought conditions, in addition to concerns over coal supply and a global energy crunch, resulted in a significant increase in both natural gas and power market prices. Natural gas prices increased by approximately 95 percent compared to 2020, while power prices saw an even more dramatic impact, increasing by about 120 percent at MP.MP compared to 2020. The actual average market price in 2021 was [TRADE SECRET DATA BEGINS [REDACTED] TRADE SECRET DATA ENDS]. The market volatility continued into 2022 with the continuation of high natural gas pricing, coal supply concerns due to the anticipated rail strike, and a changing grid which created unpredictability across the energy market. The actual average market price in 2022 was [TRADE SECRET DATA BEGINS [REDACTED] TRADE SECRET DATA ENDS].

As Minnesota Power transitions away from fossil fuel generation, it does not necessarily mean that renewable generation is 100 percent zero cost. Minnesota Power's renewable generation portfolio includes a combination of Company owned generation as well as PPAs. For Company owned renewable generation the fuel cost is zero; however, there is typically a price spread difference which occurs between the generator node Locational Marginal Price ("LMP") and Minnesota Power's load node. LMPs reflect the cost of supplying energy at a particular point and includes the cost of generation, transmission losses, and congestion on the grid. Due to the increase in overall market pricing during 2021 and 2022, Minnesota Power saw an increase in LMP volatility which increased congestion costs.

"Appendix I: Renewable Energy Standard and Solar Energy Standard Cost Impact Report" from the 2021 IRP⁴ has additional information on historical and projected rate impacts as Minnesota Power's fleet transitions to comply with the Minnesota Renewable Energy Standard and Solar Energy Standard. This report will be updated again in the Company's 2025 IRP, which is due March 1, 2025.

⁴ In the Matter of Minnesota Power's 2021-2035 Integrated Resource Plan in Docket No. E015/RP-21-33, Appendix I Renewable Energy Standard Rate Impact Report, filed on April 1, 2021

III. CONCLUSION

Minnesota Power's 2022 FPE expenses were higher than forecast; however, the actual costs are reasonable given the significant increase in market prices that occurred. The Company requests the Commission approve our 2022 FPE true-up request of \$13.3 million.

Dated: May 11, 2023

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Hillary A. Creurer".

Hillary A. Creurer
Regulatory Compliance Administrator
Minnesota Power
30 W. Superior Street
Duluth, MN 55802
(218) 355-3455
hcreurer@allete.com

Generation Facilities Maintenance Expense
Docket No. E999/AA-06-1208, dated February 6, 2008

Minnesota Power
AAA Compliance Filing
Summary of Generation Maintenance Expenses

		Total Company Final Rates Test Year 2017 Docket No. E015/GR-16-664 [1]	Total Company Commission Decision Test Year 2022 Docket No. E015/GR-21-335 [2]	MN Jurisdiction Commission Decision Test Year 2022 Docket No. E015/GR-21-335 [2]	Total Company 2022 Actual Expenses [3]	MN Jurisdiction 2022 Actual Expenses [4]
<u>Steam Power Generation Maintenance</u>						
Maintenance Supervision and Engineering	510	\$4,913,827	\$3,506,625	\$3,038,890	\$3,188,136	\$2,762,883
Maintenance of Structures	511	\$582,993	\$621,679	\$538,756	\$969,713	\$840,367
Maintenance of Boiler Plant	512	\$16,051,910	\$5,218,525	\$4,522,446	\$5,121,939	\$4,438,743
Maintenance of Electric Plant	513	\$2,143,926	\$1,232,262	\$1,067,895	\$2,178,344	\$1,887,783
Maintenance of Misc. Steam Plant	514	\$5,109,261	\$2,297,991	\$1,991,471	\$3,977,236	\$3,446,728
Sub-Total Steam Power		\$28,801,917	\$12,877,082	\$11,159,458	\$15,435,368	\$13,376,504
<u>Hydraulic Power Generation Maintenance</u>						
Maintenance Supervision and Engineering	541	\$514,969	\$385,085	\$332,980	\$473,322	\$409,278
Maintenance of Structures	542	\$73,962	\$42,993	\$37,176	\$12,495	\$10,804
Maintenance of Reservoirs, Dams and Waterways	543	\$604,374	\$859,941	\$743,584	\$1,025,378	\$886,636
Maintenance of Electric Plant	544	\$1,581,601	\$1,188,851	\$1,027,990	\$710,968	\$614,769
Maintenance of Misc. Hydraulic Plant	545	\$1,058,911	\$635,202	\$549,254	\$924,774	\$799,645
Sub-Total Hydraulic Power		\$3,833,817	\$3,112,072	\$2,690,984	\$3,146,936	\$2,721,132
<u>Other Power Generation - Wind Maintenance</u>						
Maintenance Supervision and Engineering	551	\$19,855	\$85,000	\$74,476	\$0	\$0
Maintenance of Structures	552	\$15,000	\$0	\$0	\$0	\$0
Maintenance of Generating and Electric Plant	553	\$9,116,984	\$10,344,482	\$9,063,732	\$10,475,621	\$9,178,634
Maintenance of Misc. Other Pwr Generation Plt.	554	\$211,331	\$1,803,372	\$158,097	\$1,659,006	\$1,453,605
Sub-Total Other Power - Wind		\$9,363,170	\$12,232,854	\$9,296,305	\$12,134,627	\$10,632,239
TOTAL		\$41,998,904	\$28,222,008	\$23,146,747	\$30,716,931	\$26,729,875

[1] Docket E015/GR-16-664 Compliance Filing dated 6-28-18, Section VIII, Compliance Schedule 16, CCOSS, column Total Company

[2] This is based on the commission decision; it will not get final approval until after reconsideration and a compliance filing

[3] 2022 report run 01/17/2022 by Accounting

[4] 2022 report run on 4/19/2022 by the Rates department

Minnesota Power

**Docket GR-16-664, Compliance Filing dated 6-28-18, Section VIII, CCROSS,
FINAL 2017 General Rates**

	FERC Acct No.	Total Amounts	Final Adjustments	Total Company Compliance 2017 Cost of Service Model	Total Company Commission Decision 2022 Cost of Service Model	MN Jurisdiction Commission Decision 2022 Cost of Service Model
<u>Utility Operating Expense</u>						
Operations & Maintenance Exp.						
Steam Production Demand						
Supervision & Engineering	500	9,929,976	(2,721,120)	7,208,856	\$5,009,395	\$4,341,211
Steam Expenses	502	11,420,955	(987,888)	10,433,067	\$4,295,187	\$3,722,269
Steam from other sources	503	-		-		
Electric Expenses	505	1,269,686		1,269,686	\$1,567,840	\$1,358,712
Miscellaneous	506	910,628		910,628	\$372,533	\$322,842
Maint. Structures	511	582,993		582,993	\$621,679	\$538,756
Misc Maint Plant	514	5,109,261		5,109,261	\$2,297,991	\$1,991,471
Total Demand Steam Production		29,223,499	(3,709,008)	25,514,491	\$14,164,625	\$12,275,261
Steam Production Energy:						
Maint. Supervision & Engineering	510	5,403,455	(489,628)	4,913,827	\$3,506,625	\$3,038,890
Maint. Boiler Plant	512	16,051,910		16,051,910	\$5,218,525	\$4,522,446
Main. Electric Plant	513	2,143,926		2,143,926	\$1,232,262	\$1,067,895
Total Steam Energy		23,599,291	(489,628)	23,109,663	\$9,957,412	\$8,629,231
MP Compliance Filing, Section VIII, pg 19 of 46		52,822,790	(4,198,636)	48,624,154	\$24,122,037	\$20,904,492
Hydro Production:						
Demand						
Operations Supervision & Engineering	535	2,412,823	(1,196,209)	1,216,614	\$1,103,965	\$954,590
Hydraulic Expenses	537	1,148,580	284,933	1,433,513	\$668,463	\$578,015
Electric Expenses	538	-		-		
Miscellaneous	539	294,953		294,953	\$58,030	\$50,178
Maintenance Supervision & Engineering	541	626,777	(111,808)	514,969	\$385,085	\$332,980
Maint. Structures	542	73,962		73,962	\$42,993	\$37,176
Total Demand Hydro		4,557,095	(1,023,084)	3,534,011	\$2,258,536	\$1,952,939
Energy						
Maintenance of Reservoirs, Dams, and Waterways	543	604,374		604,374	\$859,941	\$743,584
Electric Plant	544	1,581,601		1,581,601	\$1,188,851	\$1,027,990
Maintenance of Misc Hydro Plant	545	1,058,911		1,058,911	\$635,202	\$549,254
MP Compliance Filing, Section VIII, pg 19 of 46		7,801,981	(1,023,084)	6,778,897	\$4,942,530	\$4,273,767

	FERC Acct No.	Total Amounts	Final Adjustments	Total Company Compliance 2017 Cost of Service Model	Total Company Commission Decision 2022 Cost of Service Model	MN Jurisdiction Commission Decision 2022 Cost of Service Model
<u>Utility Operating Expense</u>						
Other Power Generation (Wind Production)						
Operation & Engineering	546	3,031,660	(2,779,749)	251,911	\$445,320	\$390,185
Generation Expenses	548	481,200		481,200	\$350,000	\$306,667
Misc. Other Power Generation Expenses	549	258,931		258,931	\$1,334,096	\$1,168,922
Rents	550	3,203,516		3,203,516	\$3,173,172	\$2,780,302
Maintenance Supervision & Engineering	551	-	19,855	19,855	\$85,000	\$74,476
Maintenance of Structures	552	15,000		15,000		
Maintenance of Generating and Electric Plant	553	9,116,984		9,116,984	\$10,344,482	\$9,063,732
Maintenance of Misc. Other Power Generation Plt.	554	211,331		211,331	\$1,803,372	\$158,097
MP Compliance Filing, Section VIII, pg 19 of 46		16,318,622	(2,759,894)	13,558,728	\$17,535,442	\$13,942,381
Other Power Supply- Demand						
System Control & Load Dispatching	556	761,740		761,740	\$654,508	\$573,473
Other Expenses	557	1,443,364		1,443,364	\$1,158,580	\$1,015,136
Total		2,205,104	-	2,205,104	\$1,813,088	\$1,588,609
MP Compliance Filing, Section VIII, pg 19 of 46						
Purchased Power						
Demand	555	56,837,152		56,837,152	\$80,767,873	\$69,513,660
Energy	555	185,835,391		185,835,391	\$252,902,767	\$217,663,240
Total Purchased Power		242,672,543	-	242,672,543	\$333,670,640	\$287,176,900
MP Compliance Filing, Section VIII, pg 19 of 46						
Fuel	501	144,986,433		144,986,433	\$94,465,966	\$80,834,527
MP Compliance Filing, Section VIII, pg 19 of 46						

Note: Classification of expenses between demand and energy are based on FERC methodology used in prior rate cases. Accounts 501,510,512,513, & 544 are energy related, all others are demand.

	FERC <u>Acct No.</u>	Total <u>Amounts</u>	Final <u>Adjustments</u>	Total Company Compliance 2017 Cost of <u>Service Model</u>	Total Company Commission Decision 2022 Cost of <u>Service Model</u>	MN Jurisdiction Commission Decision 2022 Cost of <u>Service Model</u>
Utility Operating Expense						
Transmission						
Operation Supervision & Engineering	560	4,260,432	1,847,901	6,108,333	\$2,498,189	\$2,051,296
Load Dispatching	561	-		-		
Load Dispatching -Reliability	561.1	2,747,008		2,747,008	\$1,718,092	\$1,410,748
Load Disp.-monitoring/operate trans sys.	561.2	2,978,604		2,978,604	\$3,682,536	\$3,023,780
Scheduling, system control & dispatch	561.4	1,453,260		1,453,260	\$2,269,207	\$1,863,276
Reliability, Planning & Stds. Develop.	561.5	836,934		836,934	\$689,362	\$566,044
Transmission Service Studies	561.6	-		-		
Generation Interconnection Studies	561.7	46,840		46,840		
Reliability, Planning & Stds. Develop.	561.8	104,495		104,495	\$163,161	\$133,974
Station Expenses	562	-		-	\$105,978	\$87,020
Overhead Line Expenses	563	-		-		
Transmission of Electricity by Others	565	70,410,144	(39,479,943)	30,930,201	\$33,302,200	\$27,344,882
Miscellaneous Transmission Expenses	566	791,934		791,934	\$677,569	\$556,361
Rents	567	1,809,998		1,809,998	\$2,566,925	\$2,107,736
Total Operation		85,439,649	(37,632,042)	47,807,607	\$47,673,219	\$39,145,117
Maintenance						
Supervision & Engineering	568	-		-	\$3,494	\$2,869
Maint Computer Hardware	569.1	-		-		
Maint Computer Software	569.2	-		-		
Maint Communications Equip.	569.3	2,735,764		2,735,764	\$1,971,429	\$1,618,767
Station Equipment	570	2,991,552		2,991,552	\$3,882,459	\$3,187,939
Overhead Lines	571	3,564,854		3,564,854	\$2,246,908	\$1,844,966
Maintenance of Misc. Transmission Plt.	573	140,594		140,594		
Total Maintenance		9,432,764	-	9,432,764	\$8,104,290	\$6,654,541
Total Transmission Exp.		94,872,413	(37,632,042)	57,240,371	\$55,777,509	\$45,799,658
MP Compliance Filing, Section VIII, pg 19 of 46						
Regional Market Expenses	575.7	-				

	FERC <u>Acct No.</u>	Total <u>Amounts</u>	Final <u>Adjustments</u>	Total Company Compliance 2017 Cost of <u>Service Model</u>	Total Company Commission Decision 2022 Cost of <u>Service Model</u>	MN Jurisdiction Commission Decision 2022 Cost of <u>Service Model</u>
<u>Utility Operating Expense</u>						
Distribution						
Meters	586	1,067,176	(650,105)	417,071	\$1,601,868	\$1,583,742
Bulk Delivery						
Other Distribution						
Supervision & Engineering	580	1,388,711		1,388,711	\$975,790	\$923,053
Load Dispatching	581	-		-	\$628,870	\$594,883
Overhead Line Expenses	583	155,344		155,344	\$243,444	\$230,287
Underground Line Expenses	584	40,974		40,974	\$63,632	\$60,193
Street Lighting & Signal Systems	585	185,897		185,897	\$138,220	\$130,750
Customer Installations Expenses	587	-		-		
Miscellaneous	588	8,109,378		8,109,378	\$6,392,045	\$6,046,586
Rents	589	-		-	\$78,664	\$74,413
Total Operation		10,947,480	(650,105)	10,297,375	\$10,122,533	\$9,643,907
 Distribution Maintenance:				-		
Supervision & Engineering	590	805,544		805,544	\$850,059	\$804,117
Station Equipment	592	-		-	\$73,864	\$69,872
Overhead Lines	593	11,045,737		11,045,737	\$7,296,243	\$6,901,917
Underground Lines	594	1,256,834		1,256,834	\$1,701,681	\$1,609,713
Maintenance of Line Transformers	595	-		-		
Street Lighting& Signal Systems	596	-		-	\$49,430	\$46,759
Meter Expenses	597	21,580		21,580	\$11,824	\$11,690
Miscellaneous	598	1,265,330		1,265,330	\$899,207	\$850,609
Total Maintenance		14,395,025		14,395,025	\$10,882,308	\$10,294,677
Total Distribution		25,342,505	(650,105)	24,692,400	\$21,004,841	\$19,938,584

Maintenance Supervision & Engineering
MP Compliance Filing, Section VIII, pg 19 of 46

	FERC <u>Acct No.</u>	Total <u>Amounts</u>	Final <u>Adjustments</u>	Total Company Compliance 2017 Cost of <u>Service Model</u>	Total Company Commission Decision 2022 Cost of <u>Service Model</u>	MN Jurisdiction Commission Decision 2022 Cost of <u>Service Model</u>
<u>Utility Operating Expense</u>						
Customer Accounts Expenses						
Meter Reading Expenses	902	1,138,982		1,138,982	\$350,830	\$347,946
Customer Records & Collection Exp	903	4,570,409		4,570,409	\$4,776,878	\$4,737,611
Customer Accts -Credit Cards	903	350,000	-	350,000	\$294,188	\$294,188
Uncollectible Accounts	904	750,996		750,996	\$771,136	\$764,797
Total Customer Accting COSS, Vol I		6,810,387	-	6,810,387	\$6,193,032	\$6,144,542
Customer Service & Info						
Operation						
Supervision	907	-		-		
Customer Assistance Expenses	908	3,359,758		3,359,758	\$1,529,292	\$1,513,437
Misc Customer Service & Informational Exp	910	-		-		
Conserv Improve Prog-energy	908.06	10,572,615	(125,000)	10,447,625	\$10,714,344	\$10,714,344
Total Customer Service & Info Expenses		13,932,373	(125,000)	13,807,383	\$12,243,636	\$12,227,781
Maintenance Supervision & Engineering						
Sales	913	43,321		43,321	\$1,856	\$1,856
MP Compliance Filing, Section VIII, pg 19		43,321	-	43,321	\$1,856	\$1,856
Administration & General						
Property Insurance	924	8,002,236		8,002,236	\$7,509,468	\$6,591,993
Regulatory Expenses- see note below at 1	928	1,251,193		1,251,193	\$2,953,988	\$2,593,082
Regulatory Expenses- see note below at 2.	928	1,084,000		1,084,000	\$1,490,186	\$1,223,612
Advertising	930.1	131,608		131,608	\$5,250	\$4,662
Miscellaneous General Expenses	930.2	173,414		173,414	\$180,018	\$159,853
Franchise Requirement Duluth Ordinance Assessmt	927	-	-	-		
General Plant	935	4,757,908		4,757,908	\$16,833,227	\$14,947,622
Other A&G 920, 921, 925, 926		48,151,117	(7,750,412)	40,400,705	\$38,541,857	\$34,224,519
Total A&G		63,551,476	(7,750,412)	55,801,064	\$67,513,994	\$59,745,343
Retail Interest Expense for Customer Deposits	431.0-1002	1,071,000		1,071,000	\$1,248,000	\$1,248,000
Charitable Contributions	426.10	453,128		453,128	\$271,905	\$241,447
Total Operations & Maintenance Exp.		672,884,076	(54,139,173)	618,744,913	640,804,476	554,067,887

Updated Table 2(b): Estimated Average Rate Impacts of Preferred Plan Relative to Updated Actual 2021 and 2022 Average Rates and Estimated 2023 and 2024 Average Rates

Rate Class Impacts \1	2021	2022	2023	2024
Residential (average rate, cents/kWh)	12.750	14.192	14.698	14.857
Increase (cents/kWh)	-0.003	0.180	0.145	0.158
Increase (%)	-0.03%	1.27%	0.99%	1.07%
Average Impact (\$ / month)	-\$0.02	\$1.28	\$1.03	\$1.12
General Service (average rate, cents/kWh)	12.920	15.567	15.163	14.899
Increase (cents/kWh)	-0.003	0.180	0.145	0.158
Increase (%)	-0.03%	1.16%	0.96%	1.06%
Average Impact (\$ / month)	-\$0.09	\$4.72	\$3.78	\$4.10
Large Light & Power (average rate, cents/kWh)	10.083	11.621	12.084	11.914
Increase (cents/kWh)	-0.003	0.156	0.130	0.140
Increase (%)	-0.02%	1.35%	1.08%	1.18%
Average Impact (\$ / month)	-\$5.22	\$374.16	\$309.92	\$335.11
Large Power (average rate, cents/kWh)	7.784	9.128	10.066	10.453
Increase (cents/kWh)	-0.002	0.055	0.035	0.041
Increase (%)	-0.02%	0.60%	0.35%	0.40%
Average Impact (\$ / month)	-\$1,140	\$32,828	\$20,752	\$24,674
Lighting (average rate, cents/kWh)	26.520	37.336	32.634	31.982
Increase (cents/kWh)	-0.005	0.238	0.182	0.202
Increase (%)	-0.02%	0.64%	0.56%	0.63%
Average Impact (\$ / month)	-\$0.04	\$1.85	\$1.41	\$1.56
Average Weighted Increase (cents/kWh)	-0.002	0.099	0.074	0.083
Avg Weighted Increase (%)	-0.02%	0.91%	0.64%	0.71%
<p>Notes: 2021 and 2022 actual average rates are based on FERC Form 1 actual revenue and usage, average monthly actual FPE and rider billing factors, and an adjustment to align CPA factor in base rates with actual billing factor.</p> <p>2023 average base rates are prorated assuming Interim Rates continue through 7/31/2023 and Final Rates are implemented on 8/1/2023. Interim Rates are based on 12/23/21 Interim Rate Compliance Schedule 1 and Final Rates are based on draft Final Compliance Schedule E-1.</p> <p>Other 2023 rates include actual 2023 updated FPE factors with 2021 true-up, CPA adjustment assuming the new rate is implemented on 7/1/2023 as filed, the 2022 RRR factors effective 2/1/2023, the 2023 TCR factors effective 1/1/2023, and the 2023 SRRR factors effective 8/1/2023. Monthly rider rates are averaged.</p> <p>2024 average base rates are based on draft Final Compliance Filing Schedule E-1. All other billing factors noted above as being in-place by 12/31/2023 are continued through 12/31/2024.</p>				

Section B Attachment: Average Rate Components (cents/kWh)

	2021	2022	2023	2024
Avg Base Rates without FPE & Riders				
Residential	9.389	9.738	9.904	9.980
General Service	9.507	11.052	10.336	9.993
Large Light & Power	6.728	7.167	7.308	7.059
Large Power	4.835	5.071	5.740	6.199
Lighting	23.663	33.477	28.283	27.516
FPE Billing Factor				
Residential	2.783	3.480	3.773	3.773
General Service	2.841	3.552	3.820	3.820
Large Light & Power	2.771	3.465	3.728	3.728
Large Power	2.717	3.398	3.668	3.668
Lighting	2.266	2.833	3.164	3.164
CPA adjust (base vs actual/expected)				
Residential	-0.014	-0.012	0.112	0.027
General Service	-0.014	-0.012	0.112	0.027
Large Light & Power	-0.014	-0.012	0.112	0.027
Large Power	0.000	0.000	0.000	0.000
Lighting	-0.014	-0.012	0.112	0.027
Renewable Resources Rider (RRR)				
Large Power	-0.102	-0.102	0.133	0.057
All Other Retail Classes	0.178	0.178	0.165	0.380
Transmission Cost Recover Rider (TCR)				
Large Power	0.363	0.753	0.507	0.507
All Other Retail Classes	0.318	0.636	0.586	0.586
BEC 4 Environmental Rider (BEC4)				
Large Power	-0.032	0.000	0.000	0.000
All Other Retail Classes	0.000	0.000	0.000	0.000
Solar Renewable Resources Rider (SRRR)				
Residential	0.097	0.172	0.157	0.110
General Service	0.090	0.161	0.143	0.092
Large Light & Power	0.102	0.187	0.184	0.134
Large Power	0.003	0.008	0.019	0.022
Lighting	0.109	0.224	0.324	0.309
Total Average Rates				
Residential	12.750	14.192	14.698	14.857
General Service	12.920	15.567	15.163	14.899
Large Light & Power	10.083	11.621	12.084	11.914
Large Power	7.784	9.128	10.066	10.453
Lighting	26.520	37.336	32.634	31.982

Notes: 2021 and 2022 actual average rates are based on FERC Form 1 actual revenue and usage, average monthly actual FPE and rider billing factors, and an adjustment to align CPA factor in base rates with actual billing factor.

2023 average base rates are prorated assuming Interim Rates continue through 7/31/2023 and Final Rates are implemented on 8/1/2023. Average Interim Rates are taken from 12/23/2021 Interim Rate Compliance Schedule 1 and Final Rates are based on draft Final Compliance Filing Schedule E-1. Other 2023 rates include actual 2023 updated FPE factors with 2021 true-up, CPA adjustment assuming the new rate is implemented on 7/1/2023 as filed, the 2022 RRR factors effective 2/1/2023, the 2023 TCR factors effective 1/1/2023, and the 2023 SRRR factors effective 8/1/2023. Monthly rider rates are averaged.

2024 average base rates are based on draft Final Compliance Filing E-Schedule. All other billing factors noted above as being in-place by 12/31/2023 are continued through 12/31/2024.

STATE OF MINNESOTA)
) ss
COUNTY OF ST. LOUIS)

AFFIDAVIT OF SERVICE VIA
ELECTRONIC FILING

Tiana Heger of the City of Duluth, County of St. Louis, State of Minnesota, says that on the 11th day of May, 2023, she served Minnesota Power's Reply Comments in **Docket No. E015/AA-21-312** on the Minnesota Public Utilities Commission and the Energy Resources Division of the Minnesota Department of Commerce via electronic filing. The persons on E-Docket's Official Service List for this Docket were served as requested.



Tiana Heger