



2302 Great Northern Drive  
Fargo, ND 58802

**PUBLIC DOCUMENT  
NOT-PUBLIC DATA HAS BEEN EXCISED**

January 2, 2024

—Via Electronic Mail and U.S. Mail—

Steven M. Kahl, Executive Director  
North Dakota Public Service Commission  
State Capitol Building, Dept. 408  
600 East Boulevard  
Bismarck, ND 58505-0480

RE: WORK PAPERS IN SUPPORT OF THE COMPANY'S COGENERATION AND SMALL  
POWER PRODUCTION REPORT (CHAPTER 69-09-07)  
CASE NO. PU-24-\_\_\_\_

Dear Mr. Kahl:

Enclosed are the supporting work papers in conjunction with the recent submission of the Company's Cogeneration and Small Power Production compliance filing and the annual report of total energy produced by customers.

The supporting work papers contain trade secret information. In accordance with Section 69-02-09-02 of the North Dakota Administrative Code, an Application for Trade Secret Protection is being provided along with a single copy of the trade secret version of the work papers in a sealed envelope.

Please contact me at [alex.j.nisbet@xcelenergy.com](mailto:alex.j.nisbet@xcelenergy.com) if you have any questions regarding this filing.

Sincerely,

/s/

ALEX NISBET  
REGULATORY POLICY SPECIALIST

Enclosures

**Northern States Power Company  
Electric Utility - State of North Dakota  
Derivation of Metering Costs**

<b>STANDARD KWH METER</b>	<b>Single Phase</b>	<b>Three Phase</b>
(1) Installed Cost	\$129.16	\$421.13
(2) L.A.R.R.	9.45%	9.45%
(3) Levelized Cost (1)*(2)	\$12.20	\$39.79
(4) Accounting Expenses \$/Cust/Yr	\$23.76	\$23.76
(5) Total Annual (3)+(4)	\$35.97	\$63.55
(6) Total Monthly (5)/12	\$3.00	\$5.30
	<b>\$3.25</b> Proposed	<b>\$5.50</b> Proposed
	\$3.25 Last Year	\$5.50 Last Year

<b>TOD KW/KWH METER</b>	<b>Single Phase</b>	<b>Three Phase</b>
(7) Installed Cost	\$376.58	\$579.30
(8) Levelized Cost (7)*(2)	\$35.58	\$54.74
(9) Total Annual (8)+(4)	\$59.34	\$78.50
(10) Total Monthly	\$4.95	\$6.54
	<b>\$5.25</b> Proposed	<b>\$7.60</b> Proposed
	\$5.25 Last Year	\$7.60 Last Year

Source:

(1)(7) Data provided by Xcel Energy Metering Dept.

(2) See pages 4-7.

(4) See pages 2 & 3.

Assumed accounting expenses for the second meter is 50%  
 $(3170000+829000)/(81342+12764)*0.5$

Test year ending December 31, 2021 Class Cost of Service Study

Escalation rate = 11.83% (2022)

Operating & Maint (Pg 2 of 2)			1=2+3+10	2	3=4+5	4	5=6 to 9	6	7	8	9	10
	<u>Distribution Expen</u>	<u>Alloc</u>	<u>ND</u>	<u>Res</u>	<u>C&amp;I Tot</u>	<u>Sm Non-D</u>	<u>Demand</u>	<u>Second</u>	<u>Primary</u>	<u>Tr Transf</u>	<u>Trans</u>	<u>St Ltg</u>
1	Supervision & Eng'rg	ZDTS	924	509	314	56	258	221	37	0	0	101
2	Load Dispatching	D10T	79	30	48	4	45	37	8	0	0	1
3	Substations	P61	458	181	273	22	251	208	43	0	0	5
4	Overhead Lines	POL	2,284	1403	743	132	612	518	94	0	0	137
5	Underground Lines	PUL	1,474	1061	409	93	315	268	48	0	0	5
6	Line Transformers	P68	3	2	1	0	1	1	0	0	0	0
7	Meters	C12WM	273	164	108	34	74	71	3	0	0	0
8	Customer Install'n	OXDTS	290	169	94	17	77	65	12	0	0	27
9	Street Lighting	Dir Assign	312	0	0	0	0	0	0	0	0	312
10	Miscellaneous	OXDTS	2,143	1251	695	125	570	484	86	0	0	197
11	<u>Rents (Pole Attachmts)</u>	POL	289	178	94	17	77	66	12	0	0	17
12	<b>Total Distribution</b>		8,529	4948	2780	500	2280	1939	341	0	0	801
1	Supervision											
2	Meter Reading											
3	Records & Collections											
4	Uncollectibles											
5	Misc											
13	<b>Customer Accounting</b>	C11WA	4,008	3170	829	506	323	320	3	0	0	9
14	<b>Sales, Econ Dvlp &amp; Other</b>	D57E43	119	48	69	7	63	57	6	0	0	1
	<b>Admin &amp; General</b>											
15	Salaries	LABOR	6,096	2458	3513	321	3192	2769	423	0	0	125
16	Office Supplies	OXTS	4,196	1645	2498	216	2281	1983	298	0	0	53
17	Admin Transfer Credit	OXTS	(3,407)	-1336	-2028	-176	-1852	-1610	-242	0	0	-43
18	Outside Services	LABOR	1,096	442	631	58	574	498	76	0	0	22
19	Property Insurance	NEPIS	414	168	241	21	221	191	30	0	0	4
20	Pensions & Benefits	LABOR	4,998	2015	2880	263	2617	2270	347	0	0	102
21	Injuries & Claims	LABOR	842	340	485	44	441	382	58	0	0	17
22	Regulatory Exp	R01; R02	34	14	20	2	18	16	2	0	0	0
23	General Advertising	OXTS	38	15	23	2	21	18	3	0	0	0
24	Contributions	OXTS	0	0	0	0	0	0	0	0	0	0
25	Misc General Exp	OXTS	(37)	-14	-22	-2	-20	-17	-3	0	0	0
26	Rents	OXTS	2,458	963	1463	127	1336	1161	175	0	0	31
27	<u>Maint of General Plant</u>	<u>OXTS</u>	<u>54</u>	<u>21</u>	<u>32</u>	<u>3</u>	<u>30</u>	<u>26</u>	<u>4</u>	<u>0</u>	<u>0</u>	<u>1</u>
28	Total		16,782	6732	9737	880	8857	7686	1171	0	0	313
	<b>Cust Service &amp; Info</b>											
29	Cust Assist Exp - Non-CIP	C11P10	233	141	89	16	73	64	9	0	0	3
30	CIP Total	D99E1	0	0	0	0	0	0	0	0	0	0
31	<u>Instructional Advertising</u>	<u>C11P10</u>	<u>51</u>	<u>31</u>	<u>19</u>	<u>4</u>	<u>16</u>	<u>14</u>	<u>2</u>	<u>0</u>	<u>0</u>	<u>1</u>
32	Total		284	172	109	20	89	78	11	0	0	4
33	Amortizations	LABOR	6,232	2513	3591	328	3263	2830	432	0	0	127
34	<b>Total O&amp;M Expense</b>		153,060	60009	91100	7896	83204	72317	10887	0	0	1951

**Northern States Power Company  
Electric Utility - North Dakota 2021 CCROSS (\$000)**

		1=2+3+10	2	3=4+5	4	5=6 to 9	6	7	8	9	10	
<b>EXTERNAL ALLOCATORS</b>		External	<b>ND</b>	<b>Res</b>	<b>C&amp;I Tot</b>	<b>Sm Non-D</b>	<b>Demand</b>	<b>Second</b>	<b>Primary</b>	<b>Tr Transf</b>	<b>Trans</b>	<b>St Ltg</b>
1	Customers - Ave Monthly	C11	100.00%	84.60%	13.28%	9.00%	4.27%	4.24%	0.03%	0.00%	0.00%	2.12%
2	Cust Acctg Wtg Factor	C11WA	100.00%	79.08%	20.68%	12.62%	8.06%	7.98%	0.08%	0.00%	0.00%	0.24%
3	Mo Cus Wtd By Mtr Invest	C12WM	100.00%	60.19%	39.71%	12.59%	27.12%	26.11%	1.01%	0.00%	0.00%	0.10%
4	Sec & Pri Customers	C61PS	100.00%	86.24%	13.51%	9.13%	4.38%	4.34%	0.03%	0.00%	0.00%	0.26%
5	Pri & Sec Cust Served w/ 1 Ph	C61PS1Ph	100.00%	93.51%	6.49%	5.57%	0.92%	0.92%	0.01%	0.00%	0.00%	0.00%
6	C62Sec, w/o Ltg & C/I Underground	C62NL	100.00%	93.37%	6.63%	4.49%	2.14%	2.14%	0.00%	0.00%	0.00%	0.00%
7	Secondary Customers	C62Sec	100.00%	86.26%	13.48%	9.13%	4.34%	4.34%	0.00%	0.00%	0.00%	0.26%
8	Summer Peak Resp KW	D10S	100.00%	31.34%	68.66%	4.17%	64.49%	53.37%	11.12%	0.00%	0.00%	0.00%
9	Transmission Demand %	D10T	100.00%	35.60%	63.83%	4.71%	59.12%	50.21%	8.91%	0.00%	0.00%	0.57%
10	Winter Peak Resp KW	D10W	100.00%	41.68%	56.94%	5.47%	51.47%	45.70%	5.76%	0.00%	0.00%	1.39%
11	Alternative Production Allocator	D10C	100.00%	33.64%	66.05%	4.46%	61.58%	51.66%	9.93%	0.00%	0.00%	0.31%
12	Sec, Pri & TT, Class Coin kW @ Substati	D60Sub	100.00%	39.46%	59.53%	4.73%	54.80%	45.46%	9.34%	0.00%	0.00%	1.01%
13	Sec & Pri, CI Coin kW (no Min Sys; adj R	D61PS	100.00%	36.18%	62.96%	4.16%	58.80%	48.66%	10.15%	0.00%	0.00%	0.85%
14	Pri & Sec Coin kW Served w/ 1 Ph	D61PS1Ph	100.00%	72.24%	27.76%	4.67%	23.09%	18.89%	4.19%	0.00%	0.00%	0.00%
15	D62Sec, w/o Ltg & C/I Underground	D62NLL	100.00%	79.13%	20.87%	3.05%	17.82%	17.82%	0.00%	0.00%	0.00%	0.00%
16	Sec, Class Coin kW (w/o Min Sys kW)	D62SecL	100.00%	51.66%	47.70%	4.99%	42.70%	42.70%	0.00%	0.00%	0.00%	0.64%
17	Direct Assign Street Lighting	DASL	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
18	On + Off Sales MWH	E8760	100.00%	36.91%	62.43%	4.93%	57.50%	50.64%	6.85%	0.00%	0.00%	0.66%
19	Street Lighting (Dir Assign)	P73	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
20	Present Rev	R01	100.00%	40.57%	58.43%	5.51%	52.92%	47.70%	5.22%	0.00%	0.00%	1.00%
21	Late Fee Revenue Allocator	LateFee	100.00%	87.79%	12.20%	3.04%	9.16%	9.13%	0.03%	0.00%	0.00%	0.01%
			6	7	11	12	13	15	16	17	18	36
			1=2+3+10	2	3=4+5	4	5=6 to 9	6	7	8	9	10
			<b>ND</b>	<b>Res</b>	<b>C&amp;I Tot</b>	<b>Sm Non-D</b>	<b>Demand</b>	<b>Second</b>	<b>Primary</b>	<b>Tr Transf</b>	<b>Trans</b>	<b>St Ltg</b>
22	Customers - B Basis	C10	93,865	80,944	12,677	8,570	4,107	4,076	31	0	0	243
23	Cust - Ave Monthly (C10-Area Lt)	C11	96,144	81,342	12,764	8,657	4,107	4,076	31	0	0	2,038
24	Mo Cus Wtd By Cus Acct	C11WA	102,860	81,342	21,276	12,985	8,291	8,207	84	0	0	242
25	Cust Acctg Wtg Factor	C11WAF	7.34	1.00	6.22	1.50	4.72	2.01	2.71	0.00	0.00	0.12
26	Cust-Ave Mo (C11 w/ Dir Assign St Ltg)	C12	94,230	81,342	12,764	8,657	4,107	4,076	31	0	0	124
27	Mo Cus Wtd By Mtr Invest	C12WM	12,656,917	7,617,987	5,026,114	1,593,062	3,433,051	3,304,939	128,112	0	0	12,816
28	Meter Invest / Cust Factor	C12WMF	5,324	94	5,127	184	4,943	811	4,133	0	0	103
29	Sec & Pri Customers	C61PS	93,865	80,944	12,677	8,570	4,107	4,076	31	0	0	243
30	% Served by Primary Single Phase		0	1	0	0	0	0	0	0	0	0
31	Pri & Sec Cust Served w/ 1 Ph	C61PS1Ph	61,976	57,954	4,022	3,450	572	568	5	0	0	0
32	C62Sec, w/o Ltg & C/I Underground	C62NL	86,688	80,944	5,744	3,892	1,851	1,851	0	0	0	0
33	Secondary Customers	C62Sec	93,834	80,944	12,646	8,570	4,076	4,076	0	0	0	243
34	Summer Peak Resp KW	D10S	414	130	284	17	267	221	46	0	0	0
35	Dmd (D10S x Fact + D10W)/1000	D10T	10,000,000	3,560,028	6,382,730	470,854	5,911,876	5,020,560	891,317	0	0	57,242
36	Winter Peak Resp KW	D10W	332	138	189	18	171	152	19	0	0	5
37	Alternative Production Allocator	D10C	10,000,000	3,364,298	6,604,749	446,334	6,158,415	5,165,684	992,731	0	0	30,953
38	Sec, Pri & TT, Class Coin kW @ Substati	D60Sub	492,965	194,540	293,455	23,310	270,145	224,118	46,027	0	0	4,970
39	Sec & Pri, Class Coin kW (w/o Min Sys; r	D61PS	453,056	163,938	285,253	18,844	266,409	220,444	45,965	0	0	3,866
40	Pri & Sec Coin kW Served w/ 1 Ph	D61PS1Ph	162,467.082	117,374	45,093	7,586	37,507	30,697	6,810	0	0	0
41	D62Sec, w/o Ltg & C/I Underground	D62NLL	941,532.384	745,034	196,499	28,754	167,745	167,745	0	0	0	0
42	Sec, Class Coin kW (w/o Min Sys kW)	D62SecL	10,000,000.000	5,166,364	4,769,801	499,350	4,270,451	4,270,451	0	0	0	63,835
43	Annual Billing kW	D99	3,287	0	3,287	0	3,287	2,990	296	0	0	0
44	Summer Billing kW	D99S	1,137	0	1,137	0	1,137	1,032	106	0	0	0
45	Winter Billing kW	D99W	2149.487408	0	2149.487408	0	2149.487408	1958.698099	190.7893093	0	0	0
46	Non-Coinc Pk Second	DN-Sec	1181527.969	745033.6606	432628.808	63307.09647	369321.7116	369321.7116	0	0	0	3865.5
47	MWh Sales	E99	2136484.527	779209.0567	1339341.711	102502.3631	1236839.348	1086221.651	150617.6965	0	0	17933.75916
48	Late Fee Revenue Allocation	LateFee	100.00%	87.79%	12.20%	3.04%	9.16%	9.13%	0.03%	0.00%	0.00%	0.01%

**REVENUE REQUIREMENTS**

**Meter Equipment**

**North Dakota**

Income Tax Rate	24.40%
AFUDC Rate	0.00%
Beginning Year	2024
Year in Service	2024
Salvage/(Removal)%	10.00%
Escalation Factor	2.28%
Tax Life	0 years
Book Life	30.0 years
Property Tax Rate	0.79%

	Cost of Capital		Before-Tax	After-Tax
	Cost	Ratio	Weighted Cost	Weighted Cost
Equity	9.50%	52.50%	4.99%	4.99%
Preferred	0.00%	0.00%	0.00%	0.00%
L-T Debt	4.22%	46.72%	1.97%	1.49%
S-T Debt	1.00%	0.78%	0.01%	0.01%
		100.00%	6.97%	6.49%

Carrying Charge Rate	
Return Requirement	4.54%
Depreciation Requirement	3.08%
Income Tax Requirement	1.05%
<b>Total Capital Requirement</b>	<b>8.67%</b>
O&M Requirement	0.00%
Property Tax	0.78%
<b>Total LARR =</b>	<b>9.45%</b>

(LARR) Levelized Annual Revenue Requirement

Time Period	Year	Capital Expend.	AFUDC	Total CWIP	Plant in Service BOY	Plant in Service EOY	Average Plant in Service	Average Accum. Deprec.	Average Net Plant in Service	Average Acc. Def. Income Taxes	Average Rate Base	Rate of Return (Equity)	Rate of Return (Debt)	AFUDC	Operating Expenses	Book Deprec. Expense	Deferred Income Taxes	Salvage	Income Taxes
0	2024	1,000	0	1,000	0	1,000	500	8	493	3	490	24	10	0	0.00	15	5	0	2
1	2025		0	0	1,000	1,000	1,000	30	970	11	959	48	19	0	0.00	30	10	0	5
2	2026		0	0	1,000	1,000	1,000	60	940	20	920	46	18	0	0.00	30	9	0	6
3	2027		0	0	1,000	1,000	1,000	90	910	29	881	44	17	0	0.00	30	8	0	6
4	2028		0	0	1,000	1,000	1,000	120	880	36	844	42	17	0	0.00	30	7	0	7
5	2029		0	0	1,000	1,000	1,000	150	850	42	808	40	16	0	0.00	30	6	0	7
6	2030		0	0	1,000	1,000	1,000	180	820	47	773	39	15	0	0.00	30	5	0	8
7	2031		0	0	1,000	1,000	1,000	210	790	51	739	37	15	0	0.00	30	4	0	8
8	2032		0	0	1,000	1,000	1,000	240	760	55	705	35	14	0	0.00	30	4	0	8
9	2033		0	0	1,000	1,000	1,000	270	730	58	672	34	13	0	0.00	30	4	0	7
10	2034		0	0	1,000	1,000	1,000	300	700	62	638	32	13	0	0.00	30	4	0	7
11	2035		0	0	1,000	1,000	1,000	330	670	66	604	30	12	0	0.00	30	4	0	6
12	2036		0	0	1,000	1,000	1,000	360	640	69	571	28	11	0	0.00	30	4	0	6
13	2037		0	0	1,000	1,000	1,000	390	610	73	537	27	11	0	0.00	30	4	0	5
14	2038		0	0	1,000	1,000	1,000	420	580	76	504	25	10	0	0.00	30	4	0	5
15	2039		0	0	1,000	1,000	1,000	450	550	80	470	23	9	0	0.00	30	4	0	4
16	2040		0	0	1,000	1,000	1,000	480	520	83	437	22	9	0	0.00	30	4	0	3
17	2041		0	0	1,000	1,000	1,000	510	490	87	403	20	8	0	0.00	30	4	0	3
18	2042		0	0	1,000	1,000	1,000	540	460	90	370	18	7	0	0.00	30	4	0	2
19	2043		0	0	1,000	1,000	1,000	570	430	94	336	17	7	0	0.00	30	4	0	2
20	2044		0	0	1,000	1,000	1,000	600	400	95	305	15	6	0	0.00	30	(2)	0	7
21	2045		0	0	1,000	1,000	1,000	630	370	90	280	14	6	0	0.00	30	(7)	0	12
22	2046		0	0	1,000	1,000	1,000	660	340	83	257	13	5	0	0.00	30	(7)	0	11
23	2047		0	0	1,000	1,000	1,000	690	310	76	234	12	5	0	0.00	30	(7)	0	11
24	2048		0	0	1,000	1,000	1,000	720	280	68	212	11	4	0	0.00	30	(7)	0	11
25	2049		0	0	1,000	1,000	1,000	750	250	61	189	9	4	0	0.00	30	(7)	0	10
26	2050		0	0	1,000	1,000	1,000	780	220	54	166	8	3	0	0.00	30	(7)	0	10
27	2051		0	0	1,000	1,000	1,000	810	190	46	144	7	3	0	0.00	30	(7)	0	10
28	2052		0	0	1,000	1,000	1,000	840	160	39	121	6	2	0	0.00	30	(7)	0	9
29	2053		0	0	1,000	1,000	1,000	870	130	32	98	5	2	0	0.00	30	(7)	0	9
		1,000	0	1,000											0	885	28	0	208



**REVENUE REQUIREMENTS**

**Meter Equipment**

**North Dakota**

Income Tax Rate

AFUDC Rate

Beginning Year

Year in Service

Salvage/(Removal)%

Escalation Factor

Tax Life

Book Life

Property Tax Rate

Time Period	Year	Tax Depreciation Table								
		2024	2025	2026	2027	2028	Total	BOY	EOY	Average
0	2024	38					38	0	0	0
1	2025	72	0				72	0	0	0
2	2026	67	0	0			67	0	0	0
3	2027	62	0	0	0		62	0	0	0
4	2028	57	0	0	0	0	57	0	0	0
5	2029	53	0	0	0	0	53	0	0	0
6	2030	49	0	0	0	0	49	0	0	0
7	2031	45	0	0	0	0	45	0	0	0
8	2032	45	0	0	0	0	45	0	0	0
9	2033	45	0	0	0	0	45	0	0	0
10	2034	45	0	0	0	0	45	0	0	0
11	2035	45	0	0	0	0	45	0	0	0
12	2036	45	0	0	0	0	45	0	0	0
13	2037	45	0	0	0	0	45	0	0	0
14	2038	45	0	0	0	0	45	0	0	0
15	2039	45	0	0	0	0	45	0	0	0
16	2040	45	0	0	0	0	45	0	0	0
17	2041	45	0	0	0	0	45	0	0	0
18	2042	45	0	0	0	0	45	0	0	0
19	2043	45	0	0	0	0	45	0	0	0
20	2044	22	0	0	0	0	22	0	0	0
21	2045	0	0	0	0	0	0	0	0	0
22	2046	0	0	0	0	0	0	0	0	0
23	2047	0	0	0	0	0	0	0	0	0
24	2048	0	0	0	0	0	0	0	0	0
25	2049	0	0	0	0	0	0	0	0	0
26	2050	0	0	0	0	0	0	0	0	0
27	2051	0	0	0	0	0	0	0	0	0
28	2052	0	0	0	0	0	0	0	0	0
29	2053	0	0	0	0	0	0	0	0	0
		1,000	0	0	0	0	1,000			

Time Period	Year	Book Depreciation Table								
		2024	2025	2026	2027	2028	Total	BOY	EOY	Average
0	2024	15					15	0	15	8
1	2025	30	0				30	15	45	30
2	2026	30	0	0			30	45	75	60
3	2027	30	0	0	0		30	75	105	90
4	2028	30	0	0	0	0	30	105	135	120
5	2029	30	0	0	0	0	30	135	165	150
6	2030	30	0	0	0	0	30	165	195	180
7	2031	30	0	0	0	0	30	195	225	210
8	2032	30	0	0	0	0	30	225	255	240
9	2033	30	0	0	0	0	30	255	285	270
10	2034	30	0	0	0	0	30	285	315	300
11	2035	30	0	0	0	0	30	315	345	330
12	2036	30	0	0	0	0	30	345	375	360
13	2037	30	0	0	0	0	30	375	405	390
14	2038	30	0	0	0	0	30	405	435	420
15	2039	30	0	0	0	0	30	435	465	450
16	2040	30	0	0	0	0	30	465	495	480
17	2041	30	0	0	0	0	30	495	525	510
18	2042	30	0	0	0	0	30	525	555	540
19	2043	30	0	0	0	0	30	555	585	570
20	2044	30	0	0	0	0	30	585	615	600
21	2045	30	0	0	0	0	30	615	645	630
22	2046	30	0	0	0	0	30	645	675	660
23	2047	30	0	0	0	0	30	675	705	690
24	2048	30	0	0	0	0	30	705	735	720
25	2049	30	0	0	0	0	30	735	765	750
26	2050	30	0	0	0	0	30	765	795	780
27	2051	30	0	0	0	0	30	795	825	810
28	2052	30	0	0	0	0	30	825	855	840
29	2053	30	0	0	0	0	30	855	885	870
		885	0	0	0	0	885			

**REVENUE REQUIREMENTS**

Meter Equipment

North Dakota

Income Tax Rate

AFUDC Rate

Beginning Year

Year in Service

Salvage/(Removal)%

Escalation Factor

Tax Life

Book Life

Property Tax Rate

Time Period	Year	Salvage	Deferred Taxes	BOY	EOY	Avg. Acc. Deferred Taxes	Book Depreciation	Tax Depreciation	Tax Depreciation Rates					
				Accum. Deferred Taxes	Accum. Deferred Taxes				MACRS Half Year					
									3-year	5-year	7-year	10-year	15-year	20-year
0	2024	0	5	0	5	3	1.67%	3.75%	33.33%	20.00%	14.29%	10.00%	5.00%	3.75%
1	2025	0	10	5	16	11	3.33%	7.22%	44.45%	32.00%	24.49%	18.00%	9.50%	7.22%
2	2026	0	9	16	25	20	3.33%	6.68%	14.81%	19.20%	17.49%	14.40%	8.55%	6.68%
3	2027	0	8	25	33	29	3.33%	6.18%	7.41%	11.52%	12.49%	11.52%	7.70%	6.18%
4	2028	0	7	33	39	36	3.33%	5.71%		11.52%	8.93%	9.22%	6.93%	5.71%
5	2029	0	6	39	45	42	3.33%	5.29%		5.76%	8.92%	7.37%	6.23%	5.29%
6	2030	0	5	45	49	47	3.33%	4.89%			8.93%	6.55%	5.90%	4.89%
7	2031	0	4	49	53	51	3.33%	4.52%			4.46%	6.55%	5.90%	4.52%
8	2032	0	4	53	57	55	3.33%	4.46%				6.56%	5.91%	4.46%
9	2033	0	4	57	60	58	3.33%	4.46%				6.55%	5.90%	4.46%
10	2034	0	4	60	64	62	3.33%	4.46%				3.28%	5.91%	4.46%
11	2035	0	4	64	67	66	3.33%	4.46%					5.90%	4.46%
12	2036	0	4	67	71	69	3.33%	4.46%					5.91%	4.46%
13	2037	0	4	71	74	73	3.33%	4.46%					5.90%	4.46%
14	2038	0	4	74	78	76	3.33%	4.46%					5.91%	4.46%
15	2039	0	4	78	82	80	3.33%	4.46%					2.95%	4.46%
16	2040	0	4	82	85	83	3.33%	4.46%						4.46%
17	2041	0	4	85	89	87	3.33%	4.46%						4.46%
18	2042	0	4	89	92	90	3.33%	4.46%						4.46%
19	2043	0	4	92	96	94	3.33%	4.46%						4.46%
20	2044	0	(2)	96	94	95	3.33%	2.23%						2.23%
21	2045	0	(7)	94	87	90	3.33%		100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
22	2046	0	(7)	87	79	83	3.33%							
23	2047	0	(7)	79	72	76	3.33%							
24	2048	0	(7)	72	65	68	3.33%							
25	2049	0	(7)	65	57	61	3.33%							
26	2050	0	(7)	57	50	54	3.33%							
27	2051	0	(7)	50	43	46	3.33%							
28	2052	0	(7)	43	35	39	3.33%							
29	2053	0	(7)	35	28	32	3.33%							
				28			98.33%							

**Northern States Power Company  
Electric Utility - State of North Dakota  
Derivation of Energy Payments**

<b>NET ENERGY BILLING SERVICE</b>	<b>Average Summer</b>	<b>Average Winter</b>	<b>Wtd Avg Annual</b>
(1) Estimated System Average Incremental Energy Costs for 2024 (¢/kWh)	3.408	3.205	
(2) Energy Loss Factors	0.9659	0.9648	
(3) Estimated System Average Incremental Energy Costs Adjusted for Losses (1)/(2)	3.528	3.322	
(4) Average Annual (Cents/kWh) ([1]*4/12) + ([2]*8/12)			<b>3.391</b>

<b>PURCHASE AND SALE BILLING SERVICE</b>	<b>Average Summer</b>	<b>Average Winter</b>
(1) Estimated System Average Incremental Energy Costs for 2024 (¢/kWh)	3.408	3.205
(2) Energy Loss Factors	0.9659	0.9648
(3) Estimated System Average Incremental Energy Costs Adjusted for Losses (1)/(2)	<b>3.528</b>	<b>3.322</b>

<b>TIME OF DAY PURCHASE SERVICE</b>	<b>Summer On Peak</b>	<b>Summer Off Peak</b>	<b>Winter On Peak</b>	<b>Winter Off Peak</b>
(1) Estimated System Average Incremental Energy Costs for 2024 (¢/kWh)	4.656	2.757	3.791	2.888
(2) Energy Loss Factors	0.9616	0.9682	0.9612	0.9667
(3) Estimated System Average Incremental Energy Costs Adjusted for Losses(1)/(2)	<b>4.842</b>	<b>2.847</b>	<b>3.944</b>	<b>2.987</b>

Sources:

Incremental Energy Cost Data provided by Xcel Energy's Generation Modeling .

**Northern States Power Company  
Electric Utility - State of North Dakota  
Calculation of Net Annual Avoided Capacity Costs**

[PROTECTED  
DATA BEGINS  
(Highlighted)]

(1) Completed Cost of C.T. Unit (2023 \$)	[REDACTED] /kW
(2) Inflation Net of Technical Progress	2.00%
(3) Average Service Life	40 Years
(4) Discount Rate (After Tax)	[REDACTED]
Calculation of Marginal Capital Carry Charge Rate	[REDACTED]
(5) Present Value of Revenue Requirements	[REDACTED] /kW
(6) Annuity Factor Adjustment for Inflation	0.05466
(7) Present Value of Revenue Requirements Adjusted for Inflation (5)*(6) **	[REDACTED]
(8) Marginal Capital Carrying Charge Rate (7)/(1)	[REDACTED]
(9) First Year Revenue Requirement (1)*(8)	[REDACTED] /kW (2024\$)
(10) Present Value at 7.16% for 0 years	[REDACTED] /kW
(11) Present Value of Average Annual Fuel Savings	[REDACTED] /kW
(12) Annual Avoided Capacity Cost (10)-(11)	[REDACTED] /kW
(13) Adjusted for 15% Reserve Margin (12)*1.15	[REDACTED] /kW
(14) Plus \$10.60/kW Fixed O & M (2023 \$) (13)+O&M	[REDACTED] /kW
(15) Adjusted for losses (14)*(1+(1-0.9652))	[REDACTED] /kW
(16) NET ANNUAL AVOIDED CAPACITY COST	\$48.78 /kW
(17) Net Winter On-Peak Avoided Capacity Cost (TOD PURCHASE) (16)*0.2229/2023	0.00518 \$/kWh
(18) Net Summer On-Peak Avoided Capacity Cost (TOD PURCHASE) (16)*0.7771/1022	0.03749 \$/kWh
(19) Net Annual On-Peak Avoided Capacity Cost (16)/3045	0.01602 \$/kWh
(20) Net Winter Avoided Capacity Cost Averaged Over All Winter Hours (PURCHASE & SALE BILLING) (16)*0.2340/5832	0.00180 \$/kWh
(21) Net Summer Avoided Capacity Cost Averaged Over All Summer Hours (PURCHASE & SALE BILLING) (16)*0.7660/2928	0.01308 \$/kWh
(22) Net Annual Avoided Capacity Cost Average Over All Hours (16)/8760	0.00557 \$/kWh

\*\*  $AC = k \cdot (r-j) \cdot (1+j)^{(t-1)} \cdot [1 / (1 - (1+j)^n / (1+r)^n)]$   
 Where AC = Annual Charge in year t  
 t = Year (=1)  
 K = Total Present Value Cost of Original Investment  
 r = Discount Rate (Overall Marginal Cost of Capital) ( [REDACTED] %)  
 j = Inflation Rate Net of Technology Progress (2.00%)  
 n = Expected Service Life of Investment (40 Years)

Note: The weighting factors 77.7% and 22.3% are obtained from NSP's most recent Cost of Service Study. These ratios represent relative summer and winter season capacity costs on NSP's System.

Summer Percent:	78.53%
Winter Percent:	21.47%
Total:	100.00%
O & M	[REDACTED]

	<u>On-Peak</u>	<u>Off-Peak</u>
Winter Hours	2,023	3,809
Summer Hours	<u>1,022</u>	<u>1,906</u>
Total	3,045	5,715

PROTECTED DATA ENDS]

**Northern States Power Company  
System Peak Demands  
Summer/Winter Factors**

Month	System MW	
	Full	Net
1	6,157	1,320
2	5,853	1,016
3	5,662	825
4	5,178	341
5	6,334	1,497
6	8,347	3,510
7	9,126	4,289
8	8,517	3,680
9	7,316	2,479
10	5,465	628
11	5,573	736
12	6,109	1,272
Annual Average Hourly Load	<b>4,837</b>	
<b>Average of Monthly Peaks</b>		
Year	6,636	1,799
Summer	8,327	3,489
Winter	<u>5,791</u>	<u>954</u>
Total	14,118	4,443
<b>Summer:Winter Ratio</b>	<b>1.4377</b>	<b>3.6570</b>
Summer Percent	58.98%	78.53%
Winter Percent	<u>41.02%</u>	<u>21.47%</u>
	100.00%	100.00%

**Notes:**

*Full system ratio used to weight actual summer class peaks*

*Net system ratio used to split total peaking plant into summer and winter*

Northern States Power Company  
**Electric Utility - State of North Dakota**  
**Marginal Cost of Capital**

<i>(Before Tax)</i>	Capitalization Ratio (%)	Cost (%)	Weighted (%)
LT- Debt	46.72%	4.22%	1.97%
ST- Debt	0.78%	1.00%	0.01%
Common Equity	52.50%	9.50% *	4.99%
<b>Weighted Average</b>	100.00%		<b>6.97%</b>

<i>(After Tax)</i>	Capitalization Ratio (%)	Cost (%)	Weighted (%)
LT-Debt	46.72%	4.22%	1.49%
ST-Debt	0.78%	1.00%	0.01%
Common Equity	52.50%	9.50% *	4.99%
<b>Weighted Average</b>	100.00%		<b>6.49%</b>

\* Common Equity is Commission approved return in case no. PU-20-441 (Order issued 8/18/2021)

Source:

Order on Settlement of NSP 2021 Electric Rate Increase Application in case no. PU-20-441 (Order issued 8/18/2021)  
 Tax rate - NSP Corporate Assumptions Memo (September 21, 2023)

REVENUE REQUIREMENTS

Combustion Turbine Plant

North Dakota

Income Tax Rate	24.40%
AFUDC Rate	6.95%
Beginning Year	2024
Year in Service	2024
Salvage/(Removal)%	0.00%
Escalation Factor	1.78%
Tax Life	20 years
Book Life	27.5 years
Property Tax Rate	0.79%

Cost of Capital		Before-Tax		After-Tax	
	Cost	Ratio	Weighted Cost	Weighted Cost	Weighted Cost
Equity	9.50%	52.50%	4.99%	4.99%	
Preferred	0.00%	0.00%	0.00%	0.00%	
L-T Debt	4.22%	46.72%	1.97%	1.49%	
S-T Debt	1.00%	0.78%	0.01%	0.01%	
		100.00%	6.97%	6.49%	

Carrying Charge Rate

Return Requirement	7.03%
Depreciation Requirement	0.00%
Income Tax Requirement	1.87%
Total Capital Requirement	8.90%
O&M Requirement	0.00%
Property Tax	0.81%
<b>Total LARR =</b>	<b>9.71%</b>

(LARR) Levelized Annual Revenue Requirement

Time Period	Year	Capital Expend.	AFUDC	Total CWIP	Plant in Service BOY	Plant in Service EOY	Average Plant in Service	Average Accum. Deprec.	Average Net Plant in Service	Average Acc. Def. Income Taxes	Average Rate Base	Rate of Return (Equity)	Rate of Return (Debt)	AFUDC	Operating Expenses	Book Deprec. Expense	Deferred Income Taxes	Salvage	Income Taxes
0	2022	1,000	35	1,035	0	0	0	0	0	0	517	26	10	(35)	0.00	0	0	0	8
1	2023		72	1,107	0	0	0	0	0	0	1,071	53	21	(72)	0.00	0	0	0	17
2	2024		38	1,145	0	1,145	573	0	573	0	573	29	11	(38)	0.00	0	0	0	9
3	2025		0	0	1,145	1,145	1,145	0	1,145	0	1,145	57	23	0	0.00	0	0	0	18
4	2026		0	0	1,145	1,145	1,145	0	1,145	0	1,145	57	23	0	0.00	0	0	0	18
5	2027		0	0	1,145	1,145	1,145	0	1,145	0	1,145	57	23	0	0.00	0	0	0	18
6	2028		0	0	1,145	1,145	1,145	0	1,145	0	1,145	57	23	0	0.00	0	0	0	18
7	2029		0	0	1,145	1,145	1,145	0	1,145	0	1,145	57	23	0	0.00	0	0	0	18
8	2030		0	0	1,145	1,145	1,145	0	1,145	0	1,145	57	23	0	0.00	0	0	0	18
9	2031		0	0	1,145	1,145	1,145	0	1,145	0	1,145	57	23	0	0.00	0	0	0	18
10	2032		0	0	1,145	1,145	1,145	0	1,145	0	1,145	57	23	0	0.00	0	0	0	18
11	2033		0	0	1,145	1,145	1,145	0	1,145	0	1,145	57	23	0	0.00	0	0	0	18
12	2034		0	0	1,145	1,145	1,145	0	1,145	0	1,145	57	23	0	0.00	0	0	0	18
13	2035		0	0	1,145	1,145	1,145	0	1,145	0	1,145	57	23	0	0.00	0	0	0	18
14	2036		0	0	1,145	1,145	1,145	0	1,145	0	1,145	57	23	0	0.00	0	0	0	18
15	2037		0	0	1,145	1,145	1,145	0	1,145	0	1,145	57	23	0	0.00	0	0	0	18
16	2038		0	0	1,145	1,145	1,145	0	1,145	0	1,145	57	23	0	0.00	0	0	0	18
17	2039		0	0	1,145	1,145	1,145	0	1,145	0	1,145	57	23	0	0.00	0	0	0	18
18	2040		0	0	1,145	1,145	1,145	0	1,145	0	1,145	57	23	0	0.00	0	0	0	18
19	2041		0	0	1,145	1,145	1,145	0	1,145	0	1,145	57	23	0	0.00	0	0	0	18
20	2042		0	0	1,145	1,145	1,145	0	1,145	0	1,145	57	23	0	0.00	0	0	0	18
21	2043		0	0	1,145	1,145	1,145	0	1,145	0	1,145	57	23	0	0.00	0	0	0	18
22	2044		0	0	1,145	1,145	1,145	0	1,145	0	1,145	57	23	0	0.00	0	0	0	18
23	2045		0	0	1,145	1,145	1,145	0	1,145	0	1,145	57	23	0	0.00	0	0	0	18
24	2046		0	0	1,145	1,145	1,145	0	1,145	0	1,145	57	23	0	0.00	0	0	0	18
25	2047		0	0	1,145	1,145	1,145	0	1,145	0	1,145	57	23	0	0.00	0	0	0	18
26	2048		0	0	1,145	1,145	1,145	0	1,145	0	1,145	57	23	0	0.00	0	0	0	18
27	2049		0	0	1,145	1,145	1,145	0	1,145	0	1,145	57	23	0	0.00	0	0	0	18
28	2050		0	0	1,145	1,145	1,145	0	1,145	0	1,145	57	23	0	0.00	0	0	0	18
29	2051		0	0	1,145	1,145	1,145	0	1,145	0	1,145	57	23	0	0.00	0	0	0	18
		1,000	145	1,145											0	0	0	0	533

REVENUE REQUIREMENTS

Combustion Turbine Plant

North Dakota

Income Tax Rate

AFUDC Rate

Beginning Year

Year in Service

Salvage/(Removal)%

Escalation Factor

Tax Life

Book Life

Property Tax Rate

Time Period	Year	Property Taxes	Revenue Req.	PV Revenue Req.	PV of Book Deprec.	PV of Equity Return	PV of Debt Return	PV of AFUDC	PV of Operating Expenses	PV of Property Taxes	PV of Def. Taxes	PV of Income Taxes
0	2022	0	10	10	0	26	10	(35)	0	0	0	8
1	2023	8	28	26	0	50	20	(68)	0	7	0	16
2	2024	8	19	16	0	25	10	(34)	0	7	0	8
3	2025	8	106	88	0	47	19	0	0	7	0	15
4	2026	8	106	83	0	44	18	0	0	6	0	14
5	2027	8	106	78	0	42	17	0	0	6	0	13
6	2028	8	106	73	0	39	16	0	0	5	0	13
7	2029	8	106	68	0	37	15	0	0	5	0	12
8	2030	8	106	64	0	35	14	0	0	5	0	11
9	2031	8	106	60	0	32	13	0	0	4	0	10
10	2032	8	106	57	0	30	12	0	0	4	0	10
11	2033	8	106	53	0	29	11	0	0	4	0	9
12	2034	8	106	50	0	27	11	0	0	4	0	9
13	2035	8	106	47	0	25	10	0	0	3	0	8
14	2036	8	106	44	0	24	9	0	0	3	0	8
15	2037	8	106	41	0	22	9	0	0	3	0	7
16	2038	8	106	39	0	21	8	0	0	3	0	7
17	2039	8	106	36	0	20	8	0	0	3	0	6
18	2040	8	106	34	0	18	7	0	0	3	0	6
19	2041	8	106	32	0	17	7	0	0	2	0	6
20	2042	8	106	30	0	16	6	0	0	2	0	5
21	2043	8	106	28	0	15	6	0	0	2	0	5
22	2044	8	106	27	0	14	6	0	0	2	0	5
23	2045	8	106	25	0	13	5	0	0	2	0	4
24	2046	8	106	23	0	13	5	0	0	2	0	4
25	2047	8	106	22	0	12	5	0	0	2	0	4
26	2048	8	106	21	0	11	4	0	0	2	0	4
27	2049	8	106	19	0	10	4	0	0	1	0	3
28	2050	8	106	18	0	10	4	0	0	1	0	3
29	2051	8	106	17	0	9	4	0	0	1	0	3
		229	2,922	1,231	0	736	292	(136)	0	102	0	237
		Levelized Annual Revenue Requirement:		97	0	58	23	(11)	0	8	0	19
		As % of Original Cost:		9.71%	0.00%	5.80%	2.30%	-1.08%	0.00%	0.81%	0.00%	1.87%

REVENUE REQUIREMENTS

Combustion Turbine Plant

North Dakota

Income Tax Rate

AFUDC Rate

Beginning Year

Year in Service

Salvage/(Removal)%

Escalation Factor

Tax Life

Book Life

Property Tax Rate

Time Period	Year	Tax Depreciation Table								
		2024	2025	2026	2027	2028	Total	BOY	EOY	Average
0	2022	0					0	0	0	0
1	2023	0	0				0	0	0	0
2	2024	0	0	0			0	0	0	0
3	2025	0	0	0	0		0	0	0	0
4	2026	0	0	0	0	0	0	0	0	0
5	2027	0	0	0	0	0	0	0	0	0
6	2028	0	0	0	0	0	0	0	0	0
7	2029	0	0	0	0	0	0	0	0	0
8	2030	0	0	0	0	0	0	0	0	0
9	2031	0	0	0	0	0	0	0	0	0
10	2032	0	0	0	0	0	0	0	0	0
11	2033	0	0	0	0	0	0	0	0	0
12	2034	0	0	0	0	0	0	0	0	0
13	2035	0	0	0	0	0	0	0	0	0
14	2036	0	0	0	0	0	0	0	0	0
15	2037	0	0	0	0	0	0	0	0	0
16	2038	0	0	0	0	0	0	0	0	0
17	2039	0	0	0	0	0	0	0	0	0
18	2040	0	0	0	0	0	0	0	0	0
19	2041	0	0	0	0	0	0	0	0	0
20	2042	0	0	0	0	0	0	0	0	0
21	2043	0	0	0	0	0	0	0	0	0
22	2044	0	0	0	0	0	0	0	0	0
23	2045	0	0	0	0	0	0	0	0	0
24	2046	0	0	0	0	0	0	0	0	0
25	2047	0	0	0	0	0	0	0	0	0
26	2048	0	0	0	0	0	0	0	0	0
27	2049	0	0	0	0	0	0	0	0	0
28	2050	0	0	0	0	0	0	0	0	0
29	2051	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0			

Book Depreciation Table									
2024	2025	2026	2027	2028	Total	BOY	EOY	Average	
0					0	0	0	0	0
1	0				0	0	0	0	0
2	0	0			0	0	0	0	0
3	0	0	0		0	0	0	0	0
4	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0
					0	0	0	0	0

REVENUE REQUIREMENTS

Combustion Turbine Plant

North Dakota

Income Tax Rate

AFUDC Rate

Beginning Year

Year in Service

Salvage/(Removal)%

Escalation Factor

Tax Life

Book Life

Property Tax Rate

Time Period	Year	Salvage	Deferred Taxes	BOY	EOY	Avg. Acc. Deferred Taxes	Book Depreciation	Tax Depreciation	Tax Depreciation Rates					
				Accum. Deferred Taxes	Accum. Deferred Taxes				MACRS Half Year					
									3-year	5-year	7-year	10-year	15-year	20-year
0	2022	0	0	0	0	0	1.82%	3.75%	33.33%	20.00%	14.29%	10.00%	5.00%	3.75%
1	2023	0	0	0	0	0	3.64%	7.22%	44.45%	32.00%	24.49%	18.00%	9.50%	7.22%
2	2024	0	0	0	0	0	3.64%	6.68%	14.81%	19.20%	17.49%	14.40%	8.55%	6.68%
3	2025	0	0	0	0	0	3.64%	6.18%	7.41%	11.52%	12.49%	11.52%	7.70%	6.18%
4	2026	0	0	0	0	0	3.64%	5.71%		11.52%	8.93%	9.22%	6.93%	5.71%
5	2027	0	0	0	0	0	3.64%	5.29%		5.76%	8.92%	7.37%	6.23%	5.29%
6	2028	0	0	0	0	0	3.64%	4.89%			8.93%	6.55%	5.90%	4.89%
7	2029	0	0	0	0	0	3.64%	4.52%			4.46%	6.55%	5.90%	4.52%
8	2030	0	0	0	0	0	3.64%	4.46%				6.56%	5.91%	4.46%
9	2031	0	0	0	0	0	3.64%	4.46%				6.55%	5.90%	4.46%
10	2032	0	0	0	0	0	3.64%	4.46%				3.28%	5.91%	4.46%
11	2033	0	0	0	0	0	3.64%	4.46%					5.90%	4.46%
12	2034	0	0	0	0	0	3.64%	4.46%					5.91%	4.46%
13	2035	0	0	0	0	0	3.64%	4.46%					5.90%	4.46%
14	2036	0	0	0	0	0	3.64%	4.46%					5.91%	4.46%
15	2037	0	0	0	0	0	3.64%	4.46%					2.95%	4.46%
16	2038	0	0	0	0	0	3.64%	4.46%						4.46%
17	2039	0	0	0	0	0	3.64%	4.46%						4.46%
18	2040	0	0	0	0	0	3.64%	4.46%						4.46%
19	2041	0	0	0	0	0	3.64%	4.46%						4.46%
20	2042	0	0	0	0	0	3.64%	2.23%						2.23%
21	2043	0	0	0	0	0	3.64%		100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
22	2044	0	0	0	0	0	3.64%							
23	2045	0	0	0	0	0	3.64%							
24	2046	0	0	0	0	0	3.64%							
25	2047	0	0	0	0	0	3.64%							
26	2048	0	0	0	0	0	3.64%							
27	2049	0	0	0	0	0	0.00%							
28	2050	0	0	0	0	0	0.00%							
29	2051	0	0	0	0	0	0.00%							
				0			96.36%							

**Northern States Power Company  
Electric Utility - State of North Dakota  
Derivation of Seasonal Loss Factors**

50%

ENERGY LOSS FACTORS

(1) Summer On Peak	0.9232	0.9616
(2) Summer Off Peak	0.9364	0.9682
(3) Summer Average	0.9318	0.9659
(4) Winter On Peak	0.9225	0.9612
(5) Winter Off Peak	0.9334	0.9667
(6) Winter Average	0.9296	0.9648

DEMAND LOSS FACTOR

(7) Annual Average	0.9303	0.9652
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Source:  
Information provided by Xcel Energy Load Research Dept.

Table 1

**Standard Contract Offer  
 by  
 Northern States Power Company**

**2024 Rate Sheet**

<b>Years</b>	<b>\$/kW-mth</b>	<b>Years</b>	<b>\$/MWh</b>
<b>Contract Length</b>	<b>Levelized Capacity</b>	<b>Payment Period</b>	<b>Levelized Energy (1)</b>
1	3.46		
2	3.49		
3	3.53		
4	3.56		
5	3.60		
6	3.63	1	29.79
7	3.67	2	28.95
8	3.71	3	28.20
9	3.75	4	27.51
10	3.78	5	26.86
11	3.82	6	26.25
12	3.86	7	25.68
13	3.90	8	25.13
14	3.94	9	24.61
15	3.98	10	24.10
16	4.03	11	23.62
17	4.07	12	23.15
18	4.11	13	22.70
19	4.15	14	22.27
20	4.20	15	21.84
21	4.24	16	21.43
22	4.29	17	21.04
23	4.33	18	20.65
24	4.38	19	20.28
25	4.43	20	19.92
26	4.47		
27	4.52		
28	4.57		
29	4.62		
30	4.67		
31	4.72		
32	4.77		
33	4.82		
34	4.88		
35	4.93		

(1) Minimum contract length required for levelized energy payments is 6 years. Maximum length is 20 years. Examples: A 6 year contract could receive one year of levelized energy rates at 29.79 \$/MWh with the remaining 5 years used for payback account corrections. A 20 year contract could receive 15 years of levelized payment at 21.84 \$/MWh for each year with the remaining 5 years for payback account corrections.

**Standard Contract Offer  
by  
Northern States Power Company**

**2025 Rate Sheet**

<b>Years</b>	<b>\$/kW-mth</b>	<b>Years</b>	<b>\$/MWh</b>
<b>Contract Length</b>	<b>Levelized Capacity</b>	<b>Payment Period</b>	<b>Levelized Energy (1)</b>
1	0.00		
2	0.00		
3	0.00		
4	0.00		
5	0.75		
6	1.26	1	25.54
7	1.63	2	25.52
8	1.93	3	25.38
9	2.16	4	25.16
10	2.36	5	24.89
11	2.53	6	24.58
12	2.67	7	24.25
13	2.81	8	23.90
14	2.92	9	23.55
15	3.03	10	23.19
16	3.13	11	22.83
17	3.23	12	22.46
18	3.32	13	22.10
19	3.40	14	21.75
20	3.48	15	21.40
21	3.56	16	21.05
22	3.64	17	20.71
23	3.71	18	20.37
24	3.78	19	20.04
25	3.85	20	19.71
26	3.92		
27	3.99		
28	4.06		
29	4.13		
30	4.19		
31	4.26		
32	4.33		
33	4.39		
34	4.46		
35	4.52		

(1) Minimum contract length required for levelized energy payments is 6 years. Maximum length is 20 years. Examples: A 6 year contract could receive one year of levelized energy rates at 25.54 \$/MWh with the remaining 5 years used for payback account corrections. A 20 year contract could receive 15 years of levelized payment at 21.40 \$/MWh for each year with the remaining 5 years for payback account corrections.

**Standard Contract Offer  
by  
Northern States Power Company**

**2026 Rate Sheet**

<b>Years</b>	<b>\$/kW-mth</b>	<b>Years</b>	<b>\$/MWh</b>
<b>Contract Length</b>	<b>Levelized Capacity</b>	<b>Payment Period</b>	<b>Levelized Energy (1)</b>
1	0.00		
2	0.00		
3	0.00		
4	0.00		
5	0.75		
6	1.26	1	20.70
7	1.64	2	21.61
8	1.93	3	22.15
9	2.16	4	22.46
10	2.36	5	22.60
11	2.53	6	22.62
12	2.68	7	22.57
13	2.81	8	22.45
14	2.93	9	22.28
15	3.04	10	22.08
16	3.14	11	21.86
17	3.23	12	21.62
18	3.32	13	21.36
19	3.40	14	21.10
20	3.49	15	20.83
21	3.56	16	20.55
22	3.64	17	20.27
23	3.71	18	19.99
24	3.79	19	19.71
25	3.86	20	19.43
26	3.93		
27	4.00		
28	4.06		
29	4.13		
30	4.20		
31	4.26		
32	4.33		
33	4.39		
34	4.46		
35	4.53		

(1) Minimum contract length required for levelized energy payments is 6 years. Maximum length is 20 years. Examples: A 6 year contract could receive one year of levelized energy rates at 20.70 \$/MWh with the remaining 5 years used for payback account corrections. A 20 year contract could receive 15 years of levelized payment at 20.83 \$/MWh for each year with the remaining 5 years for payback account corrections.

Northern States Power Company  
 Electric Operations - State of North Dakota  
**Annual Report of Total Energy Produced By Customers**

<b>Bill</b>	<b>Total Customer KWh Use</b>	<b>Net KWh Delivered By Company</b>	<b>KWh Received From Customers</b>	<b>Excess KWh Sold To Company</b>
2023 December	5,600	5,439	161	-
November	10,359	9,890	469	-
October	5,987	4,304	1,748	65
September	4,794	2,854	2,975	1,175
August	4,704	2,397	3,679	1,372
July	4,790	2,200	4,599	2,009
June	4,259	1,840	5,099	2,680
May	4,882	2,240	3,649	1,007
April	8,978	7,185	2,318	525
March	15,110	14,765	413	-
February	15,121	14,851	270	-
January	18,400	18,400	31	-
2022 December	6,066	5,806	161	-
<b>Total</b>	<b>109,050</b>	<b>92,171</b>	<b>25,572</b>	<b>8,833</b>

Source: Company billing records