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January 3, 2022

—Via U.S. Mail and Electronic Filing—

Steven M. Kahl, Executive Director
North Dakota Public Service Commission, Dept. 408
State Capitol
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-22-___**

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.

If you have any questions, please contact me at 701-241-8632 or John Chow at 612-330-7588.

Sincerely,

DAVID H. SEDERQUIST
SENIOR REGULATORY AND FINANCE CONSULTANT

Enclosure

2 PU-22-16 Filed 01/03/2022 Pages: 21
Work Papers - redacted
Northern States Power Company
David Sederquist

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

STANDARD KWH METER	Single Phase		Three Phase	
(1) Installed Cost	\$115.50		\$376.58	
(2) L.A.R.R.	9.49%		9.49%	
(3) Levelized Cost (1)*(2)	\$10.96		\$35.74	
(4) Accounting Expenses \$/Cust/Yr	\$21.25		\$21.25	
(5) Total Annual (3)+(4)	\$32.21		\$56.98	
(6) Total Monthly (5)/12	\$2.68	\$3.25 Proposed	\$4.75	\$5.50 Proposed
		\$3.25 Last Year		\$5.50 Last Year

TOD KW/KWH METER	Single Phase		Three Phase	
(7) Installed Cost	\$376.58		\$579.30	
(8) Levelized Cost (7)*(2)	\$35.74		\$54.98	
(9) Total Annual (8)+(4)	\$56.98		\$76.22	
(10) Total Monthly	\$4.75	\$5.25 Proposed	\$6.35	\$7.60 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, 2020 Class Cost of Service Study

Escalation rate = 2.65% (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
Distribution Expen	Allec	ND	Res	C&I Tot	Sm Non-D	Demand	Second	Primary	Tr Transf	Trans	St Ltg	
1	Supervision & Engrg	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	Rents (Pole Attachmts)	POL	289	178	94	17	77	66	12	0	0	17
12	Total Distribution		8,529	4948	2780	500	2280	1939	341	0	0	801
1	Supervision											
2	Meter Reading											
3	Records & Collections											
4	Uncollectibles											
5	Misc											
13	Customer Accounting	C11WA	4,008	3170	829	506	323	320	3	0	0	9
14	Sales, Econ Dvlp & Other	D57E43	119	48	69	7	63	57	6	0	0	1
	Admin & General											
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	Maint of General Plant	OXTS	54	21	32	3	30	26	4	0	0	1
28	Total		16,782	6732	9737	880	8857	7686	1171	0	0	313
	Cust Service & Info											
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	Instructional Advertising	C11P10	51	31	19	4	16	14	2	0	0	1
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	Total O&M Expense		153,060	60009	91100	7896	83204	72317	10887	0	0	1951

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

		1=2+3+10	2	3=4+5	4	5=6 to 9	6	7	8	9	10	
EXTERNAL ALLOCATORS		External	ND	Res	C&I Tot	Sm Non-D	Demand	Second	Primary	Tr Transf	Trans	St Ltg
1	Customers - Ave Monthly	C11	100.00%	84.60%	13.28%	9.00%	4.27%	4.24%	0.00%	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 @ Substatic	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 Re	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
EXTERNAL DATA		C10	ND	Res	C&I Tot	Sm Non-D	Demand	Second	Primary	Tr Transf	Trans	St Ltg
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 @ Substatic	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; re	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	24.41%
AFUDC Rate	0.00%
Beginning Year	2022
Year in Service	2022
Salvage/(Removal)%	10.00%
Escalation Factor	2.07%
Tax Life	0 years
Book Life	30.0 years
Property Tax Rate	0.82%

	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%
Total Capital Requirement	8.67%
O&M Requirement	0.00%
Property Tax	0.82%
Total LARR =	9.49%

(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	Property Taxes
0	2022	1,000	0	1,000	0	1,000	500	8	493	3	490	24	10	0	0.00	15	5	0	2	0
1	2023		0	0	1,000	1,000	1,000	30	970	11	959	48	19	0	0.00	30	10	0	5	8
2	2024		0	0	1,000	1,000	1,000	60	940	20	920	46	18	0	0.00	30	9	0	6	8
3	2025		0	0	1,000	1,000	1,000	90	910	29	881	44	17	0	0.00	30	8	0	6	8
4	2026		0	0	1,000	1,000	1,000	120	880	36	844	42	17	0	0.00	30	7	0	7	8
5	2027		0	0	1,000	1,000	1,000	150	850	42	808	40	16	0	0.00	30	6	0	7	8
6	2028		0	0	1,000	1,000	1,000	180	820	47	773	39	15	0	0.00	30	5	0	8	8
7	2029		0	0	1,000	1,000	1,000	210	790	51	739	37	15	0	0.00	30	4	0	8	8
8	2030		0	0	1,000	1,000	1,000	240	760	55	705	35	14	0	0.00	30	4	0	8	8
9	2031		0	0	1,000	1,000	1,000	270	730	58	672	34	13	0	0.00	30	4	0	7	8
10	2032		0	0	1,000	1,000	1,000	300	700	62	638	32	13	0	0.00	30	4	0	7	8
11	2033		0	0	1,000	1,000	1,000	330	670	66	604	30	12	0	0.00	30	4	0	6	8
12	2034		0	0	1,000	1,000	1,000	360	640	69	571	28	11	0	0.00	30	4	0	6	8
13	2035		0	0	1,000	1,000	1,000	390	610	73	537	27	11	0	0.00	30	4	0	5	8
14	2036		0	0	1,000	1,000	1,000	420	580	76	504	25	10	0	0.00	30	4	0	5	8
15	2037		0	0	1,000	1,000	1,000	450	550	80	470	23	9	0	0.00	30	4	0	4	8
16	2038		0	0	1,000	1,000	1,000	480	520	83	437	22	9	0	0.00	30	4	0	3	8
17	2039		0	0	1,000	1,000	1,000	510	490	87	403	20	8	0	0.00	30	4	0	3	8
18	2040		0	0	1,000	1,000	1,000	540	460	91	369	18	7	0	0.00	30	4	0	2	8
19	2041		0	0	1,000	1,000	1,000	570	430	94	336	17	7	0	0.00	30	4	0	2	8
20	2042		0	0	1,000	1,000	1,000	600	400	95	305	15	6	0	0.00	30	(2)	0	7	8
21	2043		0	0	1,000	1,000	1,000	630	370	90	280	14	6	0	0.00	30	(7)	0	12	8
22	2044		0	0	1,000	1,000	1,000	660	340	83	257	13	5	0	0.00	30	(7)	0	11	8
23	2045		0	0	1,000	1,000	1,000	690	310	76	234	12	5	0	0.00	30	(7)	0	11	8
24	2046		0	0	1,000	1,000	1,000	720	280	68	212	11	4	0	0.00	30	(7)	0	11	8
25	2047		0	0	1,000	1,000	1,000	750	250	61	189	9	4	0	0.00	30	(7)	0	10	8
26	2048		0	0	1,000	1,000	1,000	780	220	54	166	8	3	0	0.00	30	(7)	0	10	8
27	2049		0	0	1,000	1,000	1,000	810	190	46	144	7	3	0	0.00	30	(7)	0	10	8
28	2050		0	0	1,000	1,000	1,000	840	160	39	121	6	2	0	0.00	30	(7)	0	9	8
29	2051		0	0	1,000	1,000	1,000	870	130	32	98	5	2	0	0.00	30	(7)	0	9	8
		1,000	0	1,000											0	885	28	0	208	238

Levelized Annual

As % of t

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	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	57	57	15	24	10	0	0	0	5	2	
1	2023	121	113	28	45	18	0	0	8	10	5	
2	2024	117	103	26	40	16	0	0	7	8	5	
3	2025	114	94	25	36	14	0	0	7	6	5	
4	2026	111	86	23	33	13	0	0	6	5	5	
5	2027	108	79	22	29	12	0	0	6	4	5	
6	2028	105	72	21	26	10	0	0	6	3	5	
7	2029	102	65	19	24	9	0	0	5	2	5	
8	2030	99	60	18	21	8	0	0	5	2	5	
9	2031	96	54	17	19	8	0	0	5	2	4	
10	2032	93	50	16	17	7	0	0	4	2	4	
11	2033	90	45	15	15	6	0	0	4	2	3	
12	2034	87	41	14	13	5	0	0	4	2	3	
13	2035	84	37	13	12	5	0	0	4	2	2	
14	2036	81	34	12	10	4	0	0	3	1	2	
15	2037	79	31	12	9	4	0	0	3	1	2	
16	2038	76	28	11	8	3	0	0	3	1	1	
17	2039	73	25	10	7	3	0	0	3	1	1	
18	2040	70	23	10	6	2	0	0	3	1	1	
19	2041	67	20	9	5	2	0	0	2	1	1	
20	2042	64	18	9	4	2	0	0	2	(1)	2	
21	2043	62	17	8	4	1	0	0	2	(2)	3	
22	2044	60	15	8	3	1	0	0	2	(2)	3	
23	2045	58	14	7	3	1	0	0	2	(2)	3	
24	2046	56	12	7	2	1	0	0	2	(2)	2	
25	2047	54	11	6	2	1	0	0	2	(2)	2	
26	2048	52	10	6	2	1	0	0	2	(1)	2	
27	2049	51	9	5	1	1	0	0	2	(1)	2	
28	2050	49	8	5	1	0	0	0	1	(1)	2	
29	2051	47	8	5	1	0	0	0	1	(1)	1	
		2,381	1,239	403	425	169	0	0	106	49	89	
		Annual Revenue Requirement:	95	31	32	13	0	0	8	4	7	
		Original Cost:	9.48%	3.08%	3.25%	1.29%	0.00%	0.00%	0.81%	0.37%	0.68%	9.48%

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

		Tax Depreciation Table								
Time Period	Year	2022	2023	2024	2025	2026	Total	BOY	EOY	Average
0	2022	38					38	0	0	0
1	2023	72	0				72	0	0	0
2	2024	67	0	0			67	0	0	0
3	2025	62	0	0	0		62	0	0	0
4	2026	57	0	0	0	0	57	0	0	0
5	2027	53	0	0	0	0	53	0	0	0
6	2028	49	0	0	0	0	49	0	0	0
7	2029	45	0	0	0	0	45	0	0	0
8	2030	45	0	0	0	0	45	0	0	0
9	2031	45	0	0	0	0	45	0	0	0
10	2032	45	0	0	0	0	45	0	0	0
11	2033	45	0	0	0	0	45	0	0	0
12	2034	45	0	0	0	0	45	0	0	0
13	2035	45	0	0	0	0	45	0	0	0
14	2036	45	0	0	0	0	45	0	0	0
15	2037	45	0	0	0	0	45	0	0	0
16	2038	45	0	0	0	0	45	0	0	0
17	2039	45	0	0	0	0	45	0	0	0
18	2040	45	0	0	0	0	45	0	0	0
19	2041	45	0	0	0	0	45	0	0	0
20	2042	22	0	0	0	0	22	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
		1,000	0	0	0	0	1,000			

		Book Depreciation Table								
Time Period	Year	2022	2023	2024	2025	2026	Total	BOY	EOY	Average
0	2022	15					15	0	15	8
1	2023	30	0				30	15	45	30
2	2024	30	0	0			30	45	75	60
3	2025	30	0	0	0		30	75	105	90
4	2026	30	0	0	0	0	30	105	135	120
5	2027	30	0	0	0	0	30	135	165	150
6	2028	30	0	0	0	0	30	165	195	180
7	2029	30	0	0	0	0	30	195	225	210
8	2030	30	0	0	0	0	30	225	255	240
9	2031	30	0	0	0	0	30	255	285	270
10	2032	30	0	0	0	0	30	285	315	300
11	2033	30	0	0	0	0	30	315	345	330
12	2034	30	0	0	0	0	30	345	375	360
13	2035	30	0	0	0	0	30	375	405	390
14	2036	30	0	0	0	0	30	405	435	420
15	2037	30	0	0	0	0	30	435	465	450
16	2038	30	0	0	0	0	30	465	495	480
17	2039	30	0	0	0	0	30	495	525	510
18	2040	30	0	0	0	0	30	525	555	540
19	2041	30	0	0	0	0	30	555	585	570
20	2042	30	0	0	0	0	30	585	615	600
21	2043	30	0	0	0	0	30	615	645	630
22	2044	30	0	0	0	0	30	645	675	660
23	2045	30	0	0	0	0	30	675	705	690
24	2046	30	0	0	0	0	30	705	735	720
25	2047	30	0	0	0	0	30	735	765	750
26	2048	30	0	0	0	0	30	765	795	780
27	2049	30	0	0	0	0	30	795	825	810
28	2050	30	0	0	0	0	30	825	855	840
29	2051	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	2022	0	5	0	5	3	1.67%	3.75%	33.33%	20.00%	14.29%	10.00%	5.00%	3.75%
1	2023	0	10	5	16	11	3.33%	7.22%	44.45%	32.00%	24.49%	18.00%	9.50%	7.22%
2	2024	0	9	16	25	20	3.33%	6.68%	14.81%	19.20%	17.49%	14.40%	8.55%	6.68%
3	2025	0	8	25	33	29	3.33%	6.18%	7.41%	11.52%	12.49%	11.52%	7.70%	6.18%
4	2026	0	7	33	39	36	3.33%	5.71%		11.52%	8.93%	9.22%	6.93%	5.71%
5	2027	0	6	39	45	42	3.33%	5.29%		5.76%	8.92%	7.37%	6.23%	5.29%
6	2028	0	5	45	49	47	3.33%	4.89%			8.93%	6.55%	5.90%	4.89%
7	2029	0	4	49	53	51	3.33%	4.52%			4.46%	6.55%	5.90%	4.52%
8	2030	0	4	53	57	55	3.33%	4.46%				6.55%	5.91%	4.46%
9	2031	0	4	57	60	58	3.33%	4.46%				6.55%	5.90%	4.46%
10	2032	0	4	60	64	62	3.33%	4.46%				3.28%	5.91%	4.46%
11	2033	0	4	64	67	66	3.33%	4.46%					5.90%	4.46%
12	2034	0	4	67	71	69	3.33%	4.46%					5.91%	4.46%
13	2035	0	4	71	74	73	3.33%	4.46%					5.90%	4.46%
14	2036	0	4	74	78	76	3.33%	4.46%					5.91%	4.46%
15	2037	0	4	78	82	80	3.33%	4.46%					2.95%	4.46%
16	2038	0	4	82	85	83	3.33%	4.46%						4.46%
17	2039	0	4	85	89	87	3.33%	4.46%						4.46%
18	2040	0	4	89	92	91	3.33%	4.46%						4.46%
19	2041	0	4	92	96	94	3.33%	4.46%						4.46%
20	2042	0	(2)	96	94	95	3.33%	2.23%						2.23%
21	2043	0	(7)	94	87	90	3.33%		100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
22	2044	0	(7)	87	79	83	3.33%							
23	2045	0	(7)	79	72	76	3.33%							
24	2046	0	(7)	72	65	68	3.33%							
25	2047	0	(7)	65	57	61	3.33%							
26	2048	0	(7)	57	50	54	3.33%							
27	2049	0	(7)	50	43	46	3.33%							
28	2050	0	(7)	43	35	39	3.33%							
29	2051	0	(7)	35	28	32	3.33%							
			28				98.33%							

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

NET ENERGY BILLING SERVICE	Average Summer	Average Winter	Wtd Avg Annual
(1) Estimated System Average Incremental Energy Costs for 2021 (¢/kWh)	3.103	2.925	
(2) Energy Loss Factors	0.9659	0.9648	
(3) Estimated System Average Incremental Energy Costs Adjusted for Losses (1)/(2)	3.213	3.032	
(4) Average Annual (Cents/kWh) ([1]*4/12) + ([2]*8/12)			3.092

PURCHASE AND SALE BILLING SERVICE	Average Summer	Average Winter
(1) Estimated System Average Incremental Energy Costs for 2021 (¢/kWh)	3.103	2.925
(2) Energy Loss Factors	0.9659	0.9648
(3) Estimated System Average Incremental Energy Costs Adjusted for Losses (1)/(2)	3.213	3.032

TIME OF DAY PURCHASE SERVICE	Summer On Peak	Summer Off Peak	Winter On Peak	Winter Off Peak
(1) Estimated System Average Incremental Energy Costs for 2021 (¢/kWh)	4.312	2.445	3.673	2.526
(2) Energy Loss Factors	0.9616	0.9682	0.9612	0.9667
(3) Estimated System Average Incremental Energy Costs Adjusted for Losses(1)/(2)	4.484	2.525	3.821	2.613

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**

**[TRADE SECRET
BEGINS
(Highlighted)]**

(1) Completed Cost of C.T. Unit (2022 \$)	\$560 /kW
(2) Inflation Net of Technical Progress	2.00%
(3) Average Service Life	40 Years
(4) Discount Rate (After Tax)	7.16%
Calculation of Marginal Capital Carry Charge Rate	
(5) Present Value of Revenue Requirements (2022 \$)	/kW
(6) Annuity Factor Adjustment for Inflation **	0.05992
(7) Present Value of Revenue Requirements Adjusted for Inflation (5)*(6)	
(8) Marginal Capital Carrying Charge Rate (7)/(1)	
(9) First Year Revenue Requirement (1)*(8)	/kW (2022 \$)
(10) Present Value at 7.16% for 0 years	/kW
(11) Present Value of Average Annual Fuel Savings	/kW
(12) Annual Avoided Capacity Cost (10)-(11)	/kW
(13) Adjusted for 15% Reserve Margin (12)*1.15	/kW
(14) Plus Fixed O&M \$/kW (2022 \$) (13)+O&M	/kW
(15) Adjusted for losses (14)/0.9652	/kW
(16) NET ANNUAL AVOIDED CAPACITY COST	\$52.37 /kW
(17) Net Winter On-Peak Avoided Capacity Cost (TOD PURCHASE) (16)*21.8%/2023	0.00565 \$/kWh
(18) Net Summer On-Peak Avoided Capacity Cost (TOD PURCHASE) (16)*78.2%/1022	0.04007 \$/kWh
(19) Net Annual On-Peak Avoided Capacity Cost (16)/3045	0.01720 \$/kWh
(20) Net Winter Avoided Capacity Cost Averaged Over All Winter Hours (PURCHASE & SALE BILLING) (16)*21.8%/5832	0.00196 \$/kWh
(21) Net Summer Aoided Capacity Cost Averaged Over All Summer Hours (PURCHASE & SALE BILLING) (16)*78.2%/2928	0.01398 \$/kWh
(22) Net Annual Avoided Capacity Cost Average Over All Hours (16)/8760	0.00598 \$/kWh

**** AC = $k*(r-j)*(1+j)^{(t-1)*[1/(1-j)^n/(1+r)^n]$**
 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) (7.16%)
 j = Inflation Rate Net of Technology Progress (2.00%)
 n = Expected Service Life of Investment (40 Years)

Note: The weighting factors 78.2% and 21.8% 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:	78.16%
Winter Percent:	21.84%
Total:	100.00%
O & M	

	<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

TRADE SECRET ENDS]

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

Month	System MW	
	Full	Net
1	6,174	1,306
2	5,892	1,024
3	5,676	808
4	5,191	323
5	6,377	1,509
6	8,332	3,464
7	9,073	4,205
8	8,500	3,632
9	7,352	2,484
10	5,520	653
11	5,641	774
12	6,173	1,305
Annual Average Hourly Load	4,868	
Average of Monthly Peaks		
Year	6,658	1,791
Summer	8,314	3,446
Winter	<u>5,831</u>	<u>963</u>
Total	14,145	4,409
Summer:Winter Ratio	1.4260	3.5796
Summer Percent	58.78%	78.16%
Winter Percent	<u>41.22%</u>	<u>21.84%</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%
Weighted Average	100.00%		6.97%

<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%
Weighted Average	100.00%		6.49%

* 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 (May 24, 2021)

REVENUE REQUIREMENTS

Combustion Turbine Plant

North Dakota

Income Tax Rate	24.41%
AFUDC Rate	8.02%
Beginning Year	2022
Year in Service	2022
Salvage/(Removal)%	0.00%
Escalation Factor	2.07%
Tax Life	20 years
Book Life	27.5 years
Property Tax Rate	0.82%

	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	4.50%
Depreciation Requirement	3.70%
Income Tax Requirement	1.04%
Total Capital Requirement	9.24%
O&M Requirement	0.00%
Property Tax	0.82%
Total LARR =	10.06%

(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	0	1,000	0	1,000	500	9	491	2	489	24	10	0	0.00	18	5	0	3
1	2023	0	0	0	1,000	1,000	1,000	36	964	9	955	48	19	0	0.00	36	9	0	7
2	2024	0	0	0	1,000	1,000	1,000	73	927	17	910	45	18	0	0.00	36	7	0	7
3	2025	0	0	0	1,000	1,000	1,000	109	891	24	867	43	17	0	0.00	36	6	0	8
4	2026	0	0	0	1,000	1,000	1,000	145	855	30	825	41	16	0	0.00	36	5	0	8
5	2027	0	0	0	1,000	1,000	1,000	182	818	34	784	39	16	0	0.00	36	4	0	9
6	2028	0	0	0	1,000	1,000	1,000	218	782	38	744	37	15	0	0.00	36	3	0	9
7	2029	0	0	0	1,000	1,000	1,000	255	745	40	705	35	14	0	0.00	36	2	0	9
8	2030	0	0	0	1,000	1,000	1,000	291	709	42	667	33	13	0	0.00	36	2	0	9
9	2031	0	0	0	1,000	1,000	1,000	327	673	44	628	31	12	0	0.00	36	2	0	8
10	2032	0	0	0	1,000	1,000	1,000	364	636	46	590	29	12	0	0.00	36	2	0	7
11	2033	0	0	0	1,000	1,000	1,000	400	600	48	552	28	11	0	0.00	36	2	0	7
12	2034	0	0	0	1,000	1,000	1,000	436	564	50	513	26	10	0	0.00	36	2	0	6
13	2035	0	0	0	1,000	1,000	1,000	473	527	52	475	24	9	0	0.00	36	2	0	6
14	2036	0	0	0	1,000	1,000	1,000	509	491	54	436	22	9	0	0.00	36	2	0	5
15	2037	0	0	0	1,000	1,000	1,000	545	455	57	398	20	8	0	0.00	36	2	0	4
16	2038	0	0	0	1,000	1,000	1,000	582	418	59	360	18	7	0	0.00	36	2	0	4
17	2039	0	0	0	1,000	1,000	1,000	618	382	61	321	16	6	0	0.00	36	2	0	3
18	2040	0	0	0	1,000	1,000	1,000	655	345	63	283	14	6	0	0.00	36	2	0	3
19	2041	0	0	0	1,000	1,000	1,000	691	309	65	245	12	5	0	0.00	36	2	0	2
20	2042	0	0	0	1,000	1,000	1,000	727	273	64	209	10	4	0	0.00	36	(3)	0	7
21	2043	0	0	0	1,000	1,000	1,000	764	236	58	179	9	4	0	0.00	36	(9)	0	12
22	2044	0	0	0	1,000	1,000	1,000	800	200	49	151	8	3	0	0.00	36	(9)	0	11
23	2045	0	0	0	1,000	1,000	1,000	836	164	40	124	6	2	0	0.00	36	(9)	0	11
24	2046	0	0	0	1,000	1,000	1,000	873	127	31	96	5	2	0	0.00	36	(9)	0	10
25	2047	0	0	0	1,000	1,000	1,000	909	91	22	69	3	1	0	0.00	36	(9)	0	10
26	2048	0	0	0	1,000	1,000	1,000	945	55	13	41	2	1	0	0.00	36	(9)	0	10
27	2049	0	0	0	1,000	1,000	1,000	964	36	9	27	1	1	0	0.00	0	0	0	0
28	2050	0	0	0	1,000	1,000	1,000	0	1,000	9	991	49	20	0	0.00	0	0	0	16
29	2051	0	0	0	1,000	1,000	1,000	0	1,000	9	991	49	20	0	0.00	0	0	0	16
		1,000	0	1,000										0	0	964	9	0	227

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	60	60	18	24	10	0	0	0	5	3	
1	2023	8	126	119	34	45	18	0	0	8	8	6	
2	2024	8	123	108	32	40	16	0	0	7	7	6	
3	2025	8	119	99	30	36	14	0	0	7	5	6	
4	2026	8	115	90	28	32	13	0	0	6	4	6	
5	2027	8	112	82	27	29	11	0	0	6	3	6	
6	2028	8	108	74	25	25	10	0	0	6	2	6	
7	2029	8	105	68	23	23	9	0	0	5	1	6	
8	2030	8	102	62	22	20	8	0	0	5	1	5	
9	2031	8	98	56	21	18	7	0	0	5	1	5	
10	2032	8	95	51	19	16	6	0	0	4	1	4	
11	2033	8	92	46	18	14	5	0	0	4	1	3	
12	2034	8	89	42	17	12	5	0	0	4	1	3	
13	2035	8	85	38	16	10	4	0	0	4	1	2	
14	2036	8	82	34	15	9	4	0	0	3	1	2	
15	2037	8	79	31	14	8	3	0	0	3	1	2	
16	2038	8	75	28	13	7	3	0	0	3	1	1	
17	2039	8	72	25	12	6	2	0	0	3	1	1	
18	2040	8	69	22	12	5	2	0	0	3	1	1	
19	2041	8	66	20	11	4	1	0	0	2	1	1	
20	2042	8	62	18	10	3	1	0	0	2	(1)	2	
21	2043	8	60	16	10	2	1	0	0	2	(2)	3	
22	2044	8	58	14	9	2	1	0	0	2	(2)	3	
23	2045	8	55	13	9	1	1	0	0	2	(2)	3	
24	2046	8	53	12	8	1	0	0	0	2	(2)	2	
25	2047	8	50	10	8	1	0	0	0	2	(2)	2	
26	2048	8	48	9	7	0	0	0	0	2	(2)	2	
27	2049	8	11	2	0	0	0	0	0	2	0	0	
28	2050	8	93	16	0	9	3	0	0	1	0	3	
29	2051	8	93	15	0	8	3	0	0	1	0	3	
		238	2,456	1,277	469	408	162	0	0	106	32	99	
		Levelized Annual Revenue Requirement:		101	37	32	13	0	0	8	3	8	
		As % of Original Cost:		10.08%	3.70%	3.22%	1.28%	0.00%	0.00%	0.84%	0.26%	0.78%	10.08%

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									
		2022	2023	2024	2025	2026	Total	BOY	EOY	Average	
0	2022	38					38	0	38	19	
1	2023	72	0				72	38	110	74	
2	2024	67	0	0			67	110	176	143	
3	2025	62	0	0	0		62	176	238	207	
4	2026	57	0	0	0	0	57	238	295	267	
5	2027	53	0	0	0	0	53	295	348	322	
6	2028	49	0	0	0	0	49	348	397	373	
7	2029	45	0	0	0	0	45	397	442	420	
8	2030	45	0	0	0	0	45	442	487	465	
9	2031	45	0	0	0	0	45	487	532	509	
10	2032	45	0	0	0	0	45	532	576	554	
11	2033	45	0	0	0	0	45	576	621	598	
12	2034	45	0	0	0	0	45	621	665	643	
13	2035	45	0	0	0	0	45	665	710	688	
14	2036	45	0	0	0	0	45	710	755	732	
15	2037	45	0	0	0	0	45	755	799	777	
16	2038	45	0	0	0	0	45	799	844	822	
17	2039	45	0	0	0	0	45	844	888	866	
18	2040	45	0	0	0	0	45	888	933	911	
19	2041	45	0	0	0	0	45	933	978	955	
20	2042	22	0	0	0	0	22	978	0	489	
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	
		1,000	0	0	0	0	1,000				

Time Period	Year	Book Depreciation Table									
		2022	2023	2024	2025	2026	Total	BOY	EOY	Average	
0	2022	18					18	0	18	9	
1	2023	36	0				36	18	55	36	
2	2024	36	0	0			36	55	91	73	
3	2025	36	0	0	0		36	91	127	109	
4	2026	36	0	0	0	0	36	127	164	145	
5	2027	36	0	0	0	0	36	164	200	182	
6	2028	36	0	0	0	0	36	200	236	218	
7	2029	36	0	0	0	0	36	236	273	255	
8	2030	36	0	0	0	0	36	273	309	291	
9	2031	36	0	0	0	0	36	309	345	327	
10	2032	36	0	0	0	0	36	345	382	364	
11	2033	36	0	0	0	0	36	382	418	400	
12	2034	36	0	0	0	0	36	418	455	436	
13	2035	36	0	0	0	0	36	455	491	473	
14	2036	36	0	0	0	0	36	491	527	509	
15	2037	36	0	0	0	0	36	527	564	545	
16	2038	36	0	0	0	0	36	564	600	582	
17	2039	36	0	0	0	0	36	600	636	618	
18	2040	36	0	0	0	0	36	636	673	655	
19	2041	36	0	0	0	0	36	673	709	691	
20	2042	36	0	0	0	0	36	709	745	727	
21	2043	36	0	0	0	0	36	745	782	764	
22	2044	36	0	0	0	0	36	782	818	800	
23	2045	36	0	0	0	0	36	818	855	836	
24	2046	36	0	0	0	0	36	855	891	873	
25	2047	36	0	0	0	0	36	891	927	909	
26	2048	36	0	0	0	0	36	927	964	945	
27	2049	0	0	0	0	0	0	964	964	964	
28	2050	0	0	0	0	0	0	0	0	0	
29	2051	0	0	0	0	0	0	0	0	0	
		964	0	0	0	0	964				

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	5	0	5	2	1.82%	3.75%	33.33%	20.00%	14.29%	10.00%	5.00%	3.75%
1	2023	0	9	5	13	9	3.64%	7.22%	44.45%	32.00%	24.49%	18.00%	9.50%	7.22%
2	2024	0	7	13	21	17	3.64%	6.68%	14.81%	19.20%	17.49%	14.40%	8.55%	6.68%
3	2025	0	6	21	27	24	3.64%	6.18%	7.41%	11.52%	12.49%	11.52%	7.70%	6.18%
4	2026	0	5	27	32	30	3.64%	5.71%		11.52%	8.93%	9.22%	6.93%	5.71%
5	2027	0	4	32	36	34	3.64%	5.29%		5.76%	8.92%	7.37%	6.23%	5.29%
6	2028	0	3	36	39	38	3.64%	4.89%			8.93%	6.55%	5.90%	4.89%
7	2029	0	2	39	41	40	3.64%	4.52%			4.46%	6.55%	5.90%	4.52%
8	2030	0	2	41	43	42	3.64%	4.46%				6.56%	5.91%	4.46%
9	2031	0	2	43	45	44	3.64%	4.46%				6.55%	5.90%	4.46%
10	2032	0	2	45	47	46	3.64%	4.46%				3.28%	5.91%	4.46%
11	2033	0	2	47	49	48	3.64%	4.46%					5.90%	4.46%
12	2034	0	2	49	51	50	3.64%	4.46%					5.91%	4.46%
13	2035	0	2	51	53	52	3.64%	4.46%					5.90%	4.46%
14	2036	0	2	53	55	54	3.64%	4.46%					5.91%	4.46%
15	2037	0	2	55	58	57	3.64%	4.46%					2.95%	4.46%
16	2038	0	2	58	60	59	3.64%	4.46%						4.46%
17	2039	0	2	60	62	61	3.64%	4.46%						4.46%
18	2040	0	2	62	64	63	3.64%	4.46%						4.46%
19	2041	0	2	64	66	65	3.64%	4.46%						4.46%
20	2042	0	(3)	66	62	64	3.64%	2.23%						2.23%
21	2043	0	(9)	62	53	58	3.64%		100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
22	2044	0	(9)	53	44	49	3.64%							
23	2045	0	(9)	44	36	40	3.64%							
24	2046	0	(9)	36	27	31	3.64%							
25	2047	0	(9)	27	18	22	3.64%							
26	2048	0	(9)	18	9	13	3.64%							
27	2049	0	0	9	9	9	0.00%							
28	2050	0	0	9	9	9	0.00%							
29	2051	0	0	9	9	9	0.00%							
			9				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**

2022 Rate Sheet

Years	\$/kW-mth	Years	\$/MWh
Contract Length	Levelized Capacity	Payment Period	Levelized Energy (1)
1	4.08		
2	4.12		
3	4.16		
4	4.20		
5	4.24		
6	4.29	1	21.70
7	4.33	2	21.09
8	4.37	3	20.54
9	4.42	4	20.01
10	4.46	5	19.52
11	4.51	6	19.05
12	4.56	7	18.61
13	4.60	8	18.18
14	4.65	9	17.77
15	4.70	10	17.37
16	4.75	11	16.99
17	4.80	12	16.63
18	4.85	13	16.27
19	4.90	14	15.93
20	4.95	15	15.60
21	5.00	16	15.28
22	5.06	17	14.97
23	5.11	18	14.67
24	5.16	19	14.38
25	5.22	20	14.10
26	5.28		
27	5.33		
28	5.39		
29	5.45		
30	5.51		
31	5.57		
32	5.63		
33	5.69		
34	5.75		
35	5.82		

(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 21.70 \$/MWh with the remaining 5 years used for payback account corrections. A 20 year contract could receive 15 years of levelized payment at 15.60 \$/MWh for each year with the remaining 5 years for payback account corrections.

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

2023 Rate Sheet

Years	\$/kW-mth	Years	\$/MWh
Contract Length	Levelized Capacity	Payment Period	Levelized Energy (1)
1	0.00		
2	0.00		
3	0.00		
4	0.00		
5	0.88		
6	1.48	1	17.91
7	1.93	2	18.02
8	2.27	3	18.00
9	2.55	4	17.88
10	2.78	5	17.71
11	2.98	6	17.50
12	3.15	7	17.26
13	3.31	8	17.01
14	3.45	9	16.75
15	3.58	10	16.47
16	3.70	11	16.20
17	3.81	12	15.93
18	3.91	13	15.65
19	4.01	14	15.38
20	4.11	15	15.11
21	4.20	16	14.84
22	4.29	17	14.58
23	4.38	18	14.32
24	4.46	19	14.06
25	4.55	20	13.82
26	4.63		
27	4.71		
28	4.79		
29	4.87		
30	4.95		
31	5.02		
32	5.10		
33	5.18		
34	5.26		
35	5.33		

(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 17.91 \$/MWh with the remaining 5 years used for payback account corrections. A 20 year contract could receive 15 years of levelized payment at 15.11 \$/MWh for each year with the remaining 5 years for payback account corrections.

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

2024 Rate Sheet

Years	\$/kW-mth	Years	\$/MWh
Contract Length	Levelized Capacity	Payment Period	Levelized Energy (1)
1	0.00		
2	0.00		
3	0.00		
4	0.00		
5	0.88		
6	1.49	1.00	14.58
7	1.93	2.00	15.36
8	2.27	3.00	15.82
9	2.55	4.00	16.08
10	2.78	5.00	16.20
11	2.98	6.00	16.23
12	3.16	7.00	16.19
13	3.31	8.00	16.09
14	3.45	9.00	15.96
15	3.58	10.00	15.80
16	3.70	11.00	15.62
17	3.81	12.00	15.43
18	3.92	13.00	15.23
19	4.02	14.00	15.01
20	4.11	15.00	14.80
21	4.20	16.00	14.58
22	4.29	17.00	14.35
23	4.38	18.00	14.13
24	4.47	19.00	13.91
25	4.55	20.00	13.69
26	4.63		
27	4.71		
28	4.79		
29	4.87		
30	4.95		
31	5.03		
32	5.10		
33	5.18		
34	5.26		
35	5.34		

(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 14.58 \$/MWh with the remaining 5 years used for payback account corrections. A 20 year contract could receive 15 years of levelized payment at 14.80 \$/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

Bill	Total Customer KWh Use	Net KWh Delivered By Company	KWh Received From Customers	Excess KWh Sold To Company
2021 December	976	906	-	70
November	2,344	2,025	17	302
October	1,854	1,680	437	210
September	2,092	1,789	628	300
August	2,249	1,572	488	303
July	2,735	1,838	619	578
June	2,237	1,600	1,226	371
May	1,836	1,360	818	211
April	2,377	2,015	343	322
March	2,740	2,478	149	161
February	3,521	3,222	-	299
January	3,705	4,268	-	9
Total	28,666	24,753	4,725	3,136

Source: Company billing records