

NorthWestern Corporation dba NorthWestern Energy
Class Cost of Service Study
Summary Cost of Service Component Costs
South Dakota Electric
Test Year Ended December 31, 2022

Table 1. Total Electric Revenues Component Cost for the Test Year using Actual ROR by Rate Class

Line No.	Customer Class	Total	Production	Transmission	Distribut Subs	Distri Primary	Distri Second	Distri Transf	Services	Meters
1	Total Residential	47,207,213	20,440,022	4,253,994	2,398,274	6,623,698	3,657,113	1,586,423	1,271,920	3,894,644
2	Total Irrigation	204,088	54,017	8,993	15,911	47,807	26,184	9,609	10,698	24,051
3	Total Commercial	12,767,249	5,988,504	1,392,165	575,829	1,545,817	855,924	391,459	182,210	1,141,239
4	Total Commercial & Industrial	56,655,630	33,879,960	8,280,654	2,552,944	6,605,586	907,904	1,794,267	771,100	589,423
5	Total Municipal	628,710	301,176	87,103	29,585	70,892	39,734	22,134	9,545	41,479
6	Total Lighting	1,972,030	132,759	16,740	35,217	109,308	59,692	20,441	0	0
7	Controlled Off-Peak	79,701	41,900	9,040	4,307	11,697	6,469	2,897	1,312	889
8	Residential Basic	34,538,058	15,014,378	3,376,400	1,691,736	4,525,675	2,506,771	1,153,817	806,390	3,100,568
9	Residential With Space Heating	12,189,899	5,235,220	896,460	677,810	1,976,101	1,085,357	423,694	465,530	746,246
10	Residential Sp Htg & Cooling	476,761	189,456	(18,689)	28,591	121,280	64,645	8,884	0	47,499
11	Residential Dual Fuel	2,494	968	(177)	137	642	340	28	0	331
12	Irrigation Interruptible	165,969	40,249	5,054	13,223	41,331	22,556	7,607	9,369	21,139
13	Irrigation	38,119	13,768	3,939	2,688	6,476	3,627	2,002	1,328	2,912
14	Commercial General Service	8,792,488	4,036,688	1,096,169	358,238	885,493	494,593	261,596	129,423	967,461
15	Commercial Sep Metered Sp Htg	32,507	15,152	2,166	1,436	4,373	2,392	853	0	4,053
16	Commercial Sp Htg & Cooling	1,375,407	686,767	30,290	82,689	290,613	157,047	39,948	0	42,277
17	Commercial All Inclusive	2,566,847	1,249,896	263,539	133,466	365,338	201,892	89,062	52,788	127,449
18	Commercial & Industrial	15,720,900	8,532,270	2,415,750	672,308	1,628,423	907,904	498,851	209,549	480,055
19	Commercial & Industrial Large	40,934,731	25,347,691	5,864,905	1,880,636	4,977,162	0	1,295,416	561,551	109,368
20	Municipal Pumping	628,710	301,176	87,103	29,585	70,892	39,734	22,134	9,545	41,479
21	Lighting Reddy-Guard	570,629	68,011	16,728	19,246	49,705	27,632	13,548	0	0
22	Lighting Hwy Street & Area Light	1,401,401	64,747	12	15,971	59,603	32,060	6,893	0	0
23	Controlled Off-Peak	79,701	41,900	9,040	4,307	11,697	6,469	2,897	1,312	889
24	Total	119,514,621	60,838,339	14,048,689	5,612,067	15,014,804	5,553,019	3,827,231	2,246,784	5,691,725

NorthWestern Corporation dba NorthWestern Energy
Class Cost of Service Study
Summary Cost of Service Component Costs
South Dakota Electric
Test Year Ended December 31, 2022

Table 1. Total Electric Revenues Component Cost for the Test Year using Actual ROR by Rate Class

Line No.	Customer Class	Cust Mtr Read	Cust Records	Cust Other	Lighting	Energy Rel	Fuel	Ext Transm	Ad Valorem
1	Total Residential	47,321	1,305,576	1,638,943	0	89,286	0	0	0
2	Total Irrigation	205	2,130	4,261	0	223	0	0	0
3	Total Commercial	12,883	266,694	383,367	0	31,158	0	0	0
4	Total Commercial & Industrial	44,659	71,998	923,055	0	234,081	0	0	0
5	Total Municipal	1,442	7,795	14,419	0	3,405	(0)	0	0
6	Total Lighting	0	25,902	94,368	1,477,118	486	0	0	0
7	Controlled Off-Peak	111	78	862	0	141	0	0	0
8	Residential Basic	37,148	1,024,113	1,225,402	0	75,660	0	0	0
9	Residential With Space Heating	9,963	275,278	383,017	0	15,223	0	0	0
10	Residential Sp Htg & Cooling	208	6,143	30,329	0	(1,585)	0	0	0
11	Residential Dual Fuel	1	41	194	0	(12)	0	0	0
12	Irrigation Interruptible	187	1,686	3,504	0	63	0	0	0
13	Irrigation	18	444	757	0	160	0	0	0
14	Commercial General Service	8,952	242,019	285,239	0	26,617	0	0	0
15	Commercial Sep Metered Sp Htg	13	368	1,676	0	25	0	0	0
16	Commercial Sp Htg & Cooling	124	3,559	43,916	0	(1,823)	0	0	0
17	Commercial All Inclusive	3,794	20,748	52,536	0	6,340	0	0	0
18	Commercial & Industrial	34,467	59,056	213,126	0	69,142	0	0	0
19	Commercial & Industrial Large	10,192	12,943	709,928	0	164,939	0	0	0
20	Municipal Pumping	1,442	7,795	14,419	0	3,405	(0)	0	0
21	Lighting Reddy-Guard	0	22,493	82,663	269,313	1,290	0	0	0
22	Lighting Hwy Street & Area Light	0	3,408	11,706	1,207,804	(804)	0	0	0
23	Controlled Off-Peak	111	78	862	0	141	0	0	0
24	Total	106,620	1,680,173	3,059,274	1,477,118	358,780	(0)	0	0

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Class Cost of Service Study
Summary Cost of Service Component Costs
South Dakota Electric
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Table 2. Total Claimed Electric Revenues Component Cost for the Test Year at Equalized ROR

Line No.	Customer Class	Total	Production	Transmission	Distribut Subs	Distri Primary	Distri Second	Distri Transf	Services	Meters
1	Total Residential	66,421,260	29,080,145	7,667,492	3,528,255	8,835,704	4,928,170	2,549,280	1,623,304	4,804,685
2	Total Irrigation	362,325	97,348	26,114	31,753	78,816	44,002	23,109	16,385	36,329
3	Total Commercial	15,572,285	7,329,306	1,921,765	765,896	1,917,912	1,069,734	553,408	183,473	1,117,145
4	Total Commercial & Industrial	64,458,613	38,556,058	10,127,128	2,908,372	7,301,666	732,977	2,097,054	833,108	529,396
5	Total Municipal	469,502	223,887	56,548	21,776	55,613	30,953	15,478	7,701	33,661
6	Total Lighting	2,999,337	290,919	79,236	78,923	194,854	108,849	57,685	0	0
7	Controlled Off-Peak	104,949	54,684	14,090	5,686	14,396	8,020	4,071	1,569	1,057
8	Residential Basic	43,452,480	19,093,227	4,987,620	2,172,765	5,467,439	3,047,914	1,563,673	949,909	3,633,971
9	Residential With Space Heating	21,055,479	9,192,491	2,460,059	1,222,092	3,041,480	1,697,550	887,498	673,395	1,066,330
10	Residential Sp Htg & Cooling	1,901,816	789,655	218,487	132,628	324,904	181,654	97,542	0	103,613
11	Residential Dual Fuel	11,485	4,772	1,326	770	1,881	1,052	567	0	770
12	Irrigation Interruptible	333,344	87,018	23,535	29,756	73,692	41,152	21,696	15,305	33,947
13	Irrigation	28,982	10,329	2,579	1,996	5,124	2,850	1,413	1,081	2,382
14	Commercial General Service	7,565,600	3,448,129	863,410	304,254	779,901	433,910	215,576	115,787	868,291
15	Commercial Sep Metered Sp Htg	64,719	30,685	8,303	3,012	7,458	4,165	2,197	0	6,288
16	Commercial Sp Htg & Cooling	4,231,676	2,046,744	567,695	263,022	643,571	359,868	193,623	0	80,411
17	Commercial All Inclusive	3,710,290	1,803,748	482,357	195,607	486,983	271,791	142,013	67,685	162,156
18	Commercial & Industrial	12,106,344	6,607,958	1,654,945	516,087	1,322,790	732,977	365,693	174,479	401,737
19	Commercial & Industrial Large	52,352,269	31,948,099	8,472,183	2,392,285	5,978,876	0	1,731,361	658,628	127,659
20	Municipal Pumping	469,502	223,887	56,548	21,776	55,613	30,953	15,478	7,701	33,661
21	Lighting Reddy-Guard	618,123	77,760	20,577	22,116	55,327	30,862	15,993	0	0
22	Lighting Hwy Street & Area Light	2,381,214	213,159	58,658	56,806	139,527	77,987	41,692	0	0
23	Controlled Off-Peak	104,949	54,684	14,090	5,686	14,396	8,020	4,071	1,569	1,057
24	Total	150,388,271	75,632,346	19,892,373	7,340,660	18,398,961	6,922,706	5,300,086	2,665,540	6,522,273

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Class Cost of Service Study
Summary Cost of Service Component Costs
South Dakota Electric
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<i>Revenues Component Cost for the Test Year at Equalized ROR</i>									
Line No.	Customer Class	Cust Mtr Read	Cust Records	Cust Other	Lighting	Energy Rel	Fuel	Ext Transm	Ad Valorem
1	Total Residential	50,875	1,370,606	1,788,730	0	194,013	0	0	0
2	Total Irrigation	236	2,296	4,895	0	1,044	0	0	0
3	Total Commercial	12,899	261,933	388,151	0	50,664	0	0	0
4	Total Commercial & Industrial	42,965	69,808	954,187	0	305,895	0	0	0
5	Total Municipal	1,329	7,371	13,148	0	2,037	0	0	0
6	Total Lighting	0	26,955	100,921	2,054,789	6,206	0	0	0
7	Controlled Off-Peak	118	81	924	0	251	0	0	0
8	Residential Basic	39,337	1,064,412	1,307,667	0	124,546	0	0	0
9	Residential With Space Heating	11,270	298,934	440,733	0	63,645	0	0	0
10	Residential Sp Htg & Cooling	266	7,211	40,069	0	5,786	0	0	0
11	Residential Dual Fuel	2	49	261	0	35	0	0	0
12	Irrigation Interruptible	220	1,875	4,202	0	947	0	0	0
13	Irrigation	16	421	693	0	97	0	0	0
14	Commercial General Service	8,595	235,446	272,392	0	19,909	0	0	0
15	Commercial Sep Metered Sp Htg	15	407	1,987	0	203	0	0	0
16	Commercial Sp Htg & Cooling	153	4,091	55,826	0	16,671	0	0	0
17	Commercial All Inclusive	4,136	21,989	57,946	0	13,880	0	0	0
18	Commercial & Industrial	32,180	56,360	197,222	0	43,915	0	0	0
19	Commercial & Industrial Large	10,785	13,447	756,965	0	261,980	0	0	0
20	Municipal Pumping	1,329	7,371	13,148	0	2,037	0	0	0
21	Lighting Reddy-Guard	0	23,018	85,899	284,905	1,665	0	0	0
22	Lighting Hwy Street & Area Light	0	3,937	15,022	1,769,884	4,541	0	0	0
23	Controlled Off-Peak	118	81	924	0	251	0	0	0
24	Total	108,422	1,739,051	3,250,956	2,054,789	560,109	0	0	0

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Table 3. Electric Revenue Change to Achieve Equalized ROR

Line No.	Customer Class	Total	Production	Transmission	Distribut Subs	Distri Primary	Distri Second	Distri Transf	Services	Meters
1	Total Residential	19,214,048	8,640,122	3,413,499	1,129,981	2,212,006	1,271,057	962,857	351,385	910,041
2	Total Irrigation	158,237	43,331	17,121	15,842	31,009	17,818	13,500	5,687	12,278
3	Total Commercial	2,805,035	1,340,802	529,600	190,066	372,095	213,810	161,949	1,263	(24,095)
4	Total Commercial & Industrial	7,802,983	4,676,097	1,846,474	355,428	696,080	(174,926)	302,787	62,007	(60,027)
5	Total Municipal	(159,208)	(77,290)	(30,556)	(7,809)	(15,279)	(8,781)	(6,656)	(1,844)	(7,818)
6	Total Lighting	1,027,307	158,160	62,496	43,706	85,546	49,157	37,244	0	0
7	Controlled Off-Peak	25,247	12,784	5,050	1,379	2,700	1,551	1,175	257	168
8	Residential Basic	8,914,422	4,078,848	1,611,220	481,029	941,764	541,143	409,856	143,519	533,403
9	Residential With Space Heating	8,865,580	3,957,272	1,563,599	544,282	1,065,379	612,193	463,803	207,865	320,085
10	Residential Sp Htg & Cooling	1,425,055	600,198	237,176	104,037	203,625	117,009	88,658	0	56,115
11	Residential Dual Fuel	8,991	3,804	1,503	633	1,239	712	539	0	439
12	Irrigation Interruptible	167,375	46,770	18,481	16,533	32,361	18,596	14,089	5,935	12,808
13	Irrigation	(9,138)	-3,439	-1,360	-691	-1,352	-777	-589	-248	-530
14	Commercial General Service	(1,226,888)	-588,559	-232,759	-53,984	-105,592	-60,683	-46,020	-13,635	-99,170
15	Commercial Sep Metered Sp Htg	32,212	15,532	6,137	1,576	3,085	1,773	1,343	0	2,235
16	Commercial Sp Htg & Cooling	2,856,269	1,359,977	537,404	180,333	352,958	202,821	153,675	0	38,134
17	Commercial All Inclusive	1,143,443	553,852	218,818	62,141	121,644	69,899	52,951	14,898	34,706
18	Commercial & Industrial	(3,614,556)	-1,924,311	-760,805	-156,221	-305,633	-174,926	-133,158	-35,070	-78,318
19	Commercial & Industrial Large	11,417,539	6,600,408	2,607,279	511,649	1,001,714	0	435,945	97,077	18,291
20	Municipal Pumping	(159,208)	-77,290	-30,556	-7,809	-15,279	-8,781	-6,656	-1,844	-7,818
21	Lighting Reddy-Guard	47,493	9,748	3,849	2,871	5,622	3,230	2,445	0	0
22	Lighting Hwy Street & Area Light	979,813	148,412	58,646	40,835	79,924	45,927	34,799	0	0
23	Controlled Off-Peak	25,247	12,784	5,050	1,379	2,700	1,551	1,175	257	168
24	Total	30,873,650	14,794,007	5,843,685	1,728,592	3,384,157	1,369,687	1,472,856	418,756	830,548

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South Dakota Electric
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Line No.	Customer Class	Cust Mtr Read	Cust Records	Cust Other	Lighting	Energy Rel	Fuel	Ext Transm	Ad Valorem
1	Total Residential	3,554	65,030	149,788	0	104,726	0	0	0
2	Total Irrigation	31	166	634	0	821	0	0	0
3	Total Commercial	16	(4,761)	4,784	0	19,505	0	0	0
4	Total Commercial & Industrial	(1,694)	(2,191)	31,132	0	71,815	0	0	0
5	Total Municipal	(113)	(423)	(1,271)	0	(1,368)	0	0	0
6	Total Lighting	0	1,054	6,553	577,672	5,720	0	0	0
7	Controlled Off-Peak	7	3	62	0	110	0	0	0
8	Residential Basic	2,189	40,299	82,265	0	48,886	0	0	0
9	Residential With Space Heating	1,307	23,656	57,716	0	48,422	0	0	0
10	Residential Sp Htg & Cooling	57	1,068	9,739	0	7,371	0	0	0
11	Residential Dual Fuel	0	8	67	0	47	0	0	0
12	Irrigation Interruptible	32	189	698	0	885	0	0	0
13	Irrigation	-1	-23	-64	0	-64	0	0	0
14	Commercial General Service	-357	-6,573	-12,847	0	-6,708	0	0	0
15	Commercial Sep Metered Sp Htg	2	39	311	0	179	0	0	0
16	Commercial Sp Htg & Cooling	29	532	11,910	0	18,494	0	0	0
17	Commercial All Inclusive	342	1,241	5,410	0	7,540	0	0	0
18	Commercial & Industrial	-2,287	-2,695	-15,905	0	-25,227	0	0	0
19	Commercial & Industrial Large	593	505	47,036	0	97,041	0	0	0
20	Municipal Pumping	-113	-423	-1,271	0	-1,368	0	0	0
21	Lighting Reddy-Guard	0	525	3,236	15,592	375	0	0	0
22	Lighting Hwy Street & Area Light	0	529	3,316	562,080	5,345	0	0	0
23	Controlled Off-Peak	7	3	62	0	110	0	0	0
24	Total	1,801	58,878	191,682	577,672	201,330	0	0	0

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Table 4. Percent Change to Achieve Equalized ROR

Line No.	Customer Class	Total	Production	Transmission	Distribut Subs	Distri Primary	Distri Second	Distri Transf	Services	Meters
1	Total Residential	40.70%	42.27%	80.24%	47.12%	33.40%	34.76%	60.69%	27.63%	23.37%
2	Total Irrigation	77.53%	80.22%	190.38%	99.57%	64.86%	68.05%	140.49%	53.16%	51.05%
3	Total Commercial	21.97%	22.39%	38.04%	33.01%	24.07%	24.98%	41.37%	0.69%	-2.11%
4	Total Commercial & Industrial	13.77%	13.80%	22.30%	13.92%	10.54%	-19.27%	16.88%	8.04%	-10.18%
5	Total Municipal	-25.32%	-25.66%	-35.08%	-26.40%	-21.55%	-22.10%	-30.07%	-19.31%	-18.85%
6	Total Lighting	52.09%	119.13%	373.34%	124.10%	78.26%	82.35%	182.20%	0.00%	0.00%
7	Controlled Off-Peak	31.68%	30.51%	55.86%	32.01%	23.08%	23.98%	40.56%	19.62%	18.95%
8	Residential Basic	25.81%	27.17%	47.72%	28.43%	20.81%	21.59%	35.52%	17.80%	17.20%
9	Residential With Space Heating	72.73%	75.59%	174.42%	80.30%	53.91%	56.40%	109.47%	44.65%	42.89%
10	Residential Sp Htg & Cooling	298.90%	316.80%	-1269.04%	363.88%	167.90%	181.00%	997.95%	0.00%	118.14%
11	Residential Dual Fuel	360.50%	393.08%	-848.32%	463.27%	192.82%	209.25%	1958.44%	0.00%	132.39%
12	Irrigation Interruptible	100.85%	116.20%	365.65%	125.03%	78.30%	82.44%	185.22%	63.35%	60.59%
13	Irrigation	-23.97%	-24.98%	-34.52%	-25.71%	-20.88%	-21.42%	-29.42%	-18.66%	-18.20%
14	Commercial General Service	-13.95%	-14.58%	-21.23%	-15.07%	-11.92%	-12.27%	-17.59%	-10.54%	-10.25%
15	Commercial Sep Metered Sp Htg	99.09%	102.51%	283.38%	109.76%	70.55%	74.11%	157.37%	0.00%	55.15%
16	Commercial Sp Htg & Cooling	207.67%	198.03%	1774.17%	218.09%	121.45%	129.15%	384.69%	0.00%	90.20%
17	Commercial All Inclusive	44.55%	44.31%	83.03%	46.56%	33.30%	34.62%	59.45%	28.22%	27.23%
18	Commercial & Industrial	-22.99%	-22.55%	-31.49%	-23.24%	-18.77%	-19.27%	-26.69%	-16.74%	-16.31%
19	Commercial & Industrial Large	27.89%	26.04%	44.46%	27.21%	20.13%	0.00%	33.65%	17.29%	16.72%
20	Municipal Pumping	-25.32%	-25.66%	-35.08%	-26.40%	-21.55%	-22.10%	-30.07%	-19.31%	-18.85%
21	Lighting Reddy-Guard	8.32%	14.33%	23.01%	14.92%	11.31%	11.69%	18.05%	0.00%	0.00%
22	Lighting Hwy Street & Area Light	69.92%	229.22%	489146.77%	255.68%	134.10%	143.25%	504.82%	0.00%	0.00%
23	Controlled Off-Peak	31.68%	30.51%	55.86%	32.01%	23.08%	23.98%	40.56%	19.62%	18.95%
24	Total	25.83%	24.32%	41.60%	30.80%	22.54%	24.67%	38.48%	18.64%	14.59%

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South Dakota Electric
Test Year Ended December 31, 2022

Line No.	Customer Class	Cust Mtr Read	Cust Records	Cust Other	Lighting	Energy Rel	Fuel	Ext Transm	Ad Valorem
1	Total Residential	7.51%	4.98%	9.14%	0.00%	117.29%	0.00%	0.00%	0.00%
2	Total Irrigation	15.11%	7.77%	14.88%	0.00%	368.42%	0.00%	0.00%	0.00%
3	Total Commercial	0.12%	-1.79%	1.25%	0.00%	62.60%	0.00%	0.00%	0.00%
4	Total Commercial & Industrial	-3.79%	-3.04%	3.37%	0.00%	30.68%	0.00%	0.00%	0.00%
5	Total Municipal	-7.85%	-5.43%	-8.81%	0.00%	-40.17%	-100.00%	0.00%	0.00%
6	Total Lighting	0.00%	4.07%	6.94%	39.11%	1177.27%	0.00%	0.00%	0.00%
7	Controlled Off-Peak	6.35%	4.22%	7.25%	0.00%	78.36%	0.00%	0.00%	0.00%
8	Residential Basic	5.89%	3.93%	6.71%	0.00%	64.61%	0.00%	0.00%	0.00%
9	Residential With Space Heating	13.12%	8.59%	15.07%	0.00%	318.08%	0.00%	0.00%	0.00%
10	Residential Sp Htg & Cooling	27.52%	17.39%	32.11%	0.00%	-465.03%	0.00%	0.00%	0.00%
11	Residential Dual Fuel	29.54%	18.57%	34.53%	0.00%	-405.74%	0.00%	0.00%	0.00%
12	Irrigation Interruptible	17.26%	11.18%	19.91%	0.00%	1414.55%	0.00%	0.00%	0.00%
13	Irrigation	-7.49%	-5.17%	-8.42%	0.00%	-39.76%	0.00%	0.00%	0.00%
14	Commercial General Service	-3.99%	-2.72%	-4.50%	0.00%	-25.20%	0.00%	0.00%	0.00%
15	Commercial Sep Metered Sp Htg	16.11%	10.47%	18.55%	0.00%	725.68%	0.00%	0.00%	0.00%
16	Commercial Sp Htg & Cooling	23.38%	14.96%	27.12%	0.00%	-1014.31%	0.00%	0.00%	0.00%
17	Commercial All Inclusive	9.02%	5.98%	10.30%	0.00%	118.93%	0.00%	0.00%	0.00%
18	Commercial & Industrial	-6.64%	-4.56%	-7.46%	0.00%	-36.49%	0.00%	0.00%	0.00%
19	Commercial & Industrial Large	5.82%	3.90%	6.63%	0.00%	58.83%	0.00%	0.00%	0.00%
20	Municipal Pumping	-7.85%	-5.43%	-8.81%	0.00%	-40.17%	-100.00%	0.00%	0.00%
21	Lighting Reddy-Guard	0.00%	2.33%	3.92%	5.79%	29.11%	0.00%	0.00%	0.00%
22	Lighting Hwy Street & Area Light	0.00%	15.52%	28.33%	46.54%	-664.84%	0.00%	0.00%	0.00%
23	Controlled Off-Peak	6.35%	4.22%	7.25%	0.00%	78.36%	0.00%	0.00%	0.00%
24	Total	1.69%	3.50%	6.27%	39.11%	56.12%	-100.00%	0.00%	0.00%