Information Request No. 1

Company-Owned LED Street Lighting System Service Rate Design

Rate Code E30

Monthly LED Street Lighting Rate Design Summary

NSP-SD
Per HPS/LED Street Light Equivalent

	100W/30-40W	150W/50-75W	250W/110-165W	400W/200-245W
Current HPS Street Lighting Overhead Rates	\$14.06	\$16.00	\$20.68	\$25.45
Maintenance Expense Impact (Savings)	(\$0.91)	(\$0.91)	(\$0.91)	(\$0.91)
System Allocation Expense Savings	(\$0.58)	(\$0.78)	(\$1.12)	(\$1.75)
Incremental Capital Revenue Requirement	\$1.68	\$1.85	\$2.76	\$4.05
Net LED SL Fixture Rate Impact - Company Owned Street Lights ¹	\$0.19	\$0.16	\$0.73	\$1.39
Proposed Monthly LED SL Overhead Rates	\$14.25	\$16.16	\$21.41	\$26.84
Current HPS Monthly Average Bill Per Street Light - Overhead	\$15.08	\$17.49	\$23.36	\$29.66
LED Fixture Impact on HPS Street Lighting Rate	\$0.19	\$0.16	\$0.73	\$1.39
Fuel & Rider Savings Estimate	(\$0.69)	(\$0.92)	(\$1.33)	(\$2.08)
Total Monthly Bill Impact (savings)	(\$0.50)	(\$0.76)	(\$0.60)	(\$0.69)
Proposed LED Monthly Average Bill Per Street Light - Overhead	\$14.59	\$16.74	\$22.76	\$28.97
Percentage Savings (increase)	3.3%	4.3%	2.6%	2.3%

Annual Impact of LED Fixtures on the A30

¹ Overhead rates are used in the illustration, but the same adjustment will be applied to underground lighting rates

Street Lighting System Service Rate

NSP-SD
Per HPS/LED Street Light Equivalent

	100W/30-40W	150W/50-75W	250W/110-165W	400W/200-245W
Maintenance Savings				
Relamp Expense Savings	\$4.57	\$4.57	\$4.57	\$4.57
Service Order Expense Savings	\$6.36	\$6.36	\$6.36	\$6.36
Total Maintenance Savings	\$10.93	\$10.93	\$10.93	\$10.93
Monthly Savings (increase)	\$0.91	\$0.91	\$0.91	\$0.91
System Allocation Cost Savings				
Base Rate Energy Charge Savings	\$2.34	\$3.16	\$4.55	\$7.11
Demand Related Expense Savings	\$4.59	\$6.19	\$8.93	\$13.94
Total System Allocation Savings	\$6.93	\$9.35	\$13.48	\$21.05
Monthly Savings (increase)	\$0.58	\$0.78	\$1.12	\$1.75
Incremental Capital Revenue Requirement	(\$20.10)	(\$22.20)	(\$33.13)	(\$48.62)
Monthly Savings (increase)	(\$1.68)	(\$1.85)	(\$2.76)	(\$4.05)
Sub-Total LED SL Base Rate Savings (Increase)	(\$2.24)	(\$1.92)	(\$8.72)	(\$16.64)
Monthly Savings (increase)	(\$0.19)	(\$0.16)	(\$0.73)	(\$1.39)
Fuel & Rider Savings Estimate	\$8.22	\$11.07	\$15.99	\$24.97
Monthly Savings (increase)	\$0.69	\$0.92	\$1.33	\$2.08
Annual Bill Savings - LED Street Lights	\$5.98	\$9.15	\$7.27	\$8.33
Monthly Savings (increase)	\$0.50	\$0.76	\$0.60	\$0.69

Company-Owned LED Street Lighting System Service Rate Design

Rate Code E30

	NSP-SD
laintenance Savings - Annual	Per HPS/LED Street Light Equivalen

Maintenance Savings - Annual		I	Per HPS/LED Stree	t Light Equivalent	
Relamp Expense	Total	100W/30-40W	150W/50-75W	250W/110-165W	400W/200-245W
Relamp Exp Forecast	\$502,344				
No. of Rate Code A30 Street Lights	109,872				
Relamp Expense Savings per StreetLight	\$4.57	\$4.57	\$4.57	\$4.57	\$4.57
Service Order Expense					
Annual HPS Fixture Related Service Order Expense	\$698,703				
No. of Rate Code A30 Street Lights	109,872				
Service Order Expense Savings per StreetLight	\$6.36	\$6.36	\$6.36	\$6.36	\$6.36
Incremental Fixture & Installation Cost		100W/30-40W	150W/50-75W	250W/110-165W	400W/200-245W
LED Integrated Fixture		\$144.62	\$165.78	\$275.94	\$432.12
Photo Control		\$18.00	\$18.00	\$18.00	\$18.00
Labor		\$42.07	\$42.07	\$42.07	\$42.07
Total Installed Retrofit Cost		\$204.69	\$225.85	\$336.01	\$492.19
HPS Salvage		(\$2.00)	(\$2.00)	(\$2.00)	(\$2.00)
Net LED Installed Cost		\$202.69	\$223.85	\$334.01	\$490.19
29-Year LARR %		9.92%	9.92%	9.92%	9.92%
LED Fixture Incremental Annual Revenue Requirement		\$20.10	\$22.20	\$33.13	\$48.62
Incremental Monthly Capital Related Revenue Requirement		\$1.68	\$1.85	\$2.76	\$4.05

Company-Owned LED Street Lighting System Service Rate Design

Rate Code E30

			NSP-SD Per HPS/LED Street Light Equivalent				
Base Rate Energy Related Expense	Per KWh	100W/30-40W	150W/50-75W	250W/110-165W	400W/200-245W		
Energy Related Expense Rate (Cents/kWh) Test Year 2013 Average Fuel Cost (SD Average) Non-Fuel Base Rate Energy Related Expense Rate (Cents/kWh)	3.565¢ 2.847¢ 0.718¢						
HPS Annual Energy Usage (kWh) Base Rate Energy Related Expense Rate (Cents/kWh) HPS Base Rate Energy Related Expense		487 0.718¢ \$3.50	711 0.718¢ \$5.11	1,277 0.718¢ \$9.17	2,005 0.718¢ \$14.40		
LED Annual Energy Usage (kWh) Base Rate Energy Related Expense Rate (Cents/kWh) LED Base Rate Energy Related Expense		161 0.718¢ \$1.16	272 0.718¢ \$1.95	643 0.718¢ \$4.62	1,015 0.718¢ \$7.29		
Base Rate Energy Related Expense Saving		\$2.34	\$3.16	\$4.55	\$7.11		
Demand Related Expense Savings		100W/30-40W	150W/50-75W	250W/110-165W	400W/200-245W		
HPS Demand (Watts)		117	171	307	482		
Estimated Demand Expense Rate (\$/kW)		\$58.55	\$58.55	\$58.55	\$58.55		
HPS Demand Expense (\$/kW)		\$6.85	\$10.01	\$17.98	\$28.22		
LED Annual Demand (Watts)		39	65	155	244		
Estimated Demand Expense Rate (\$/kW)		\$58.55	\$58.55	\$58.55	\$58.55		
LED Demand Expense (\$/kW)		\$2.26	\$3.83	\$9.05	\$14.29		
Demand Related Expense Savings		\$4.59	\$6.19	\$8.93	\$13.94		
Based Cost of Energy Estimated Savings (FCC)		100W/30-40W	150W/50-75W	250W/110-165W	400W/200-245W		
HPS Annual Energy Usage (kWh)		487	711	1,277	2,005		
Current Fuel Clause Street Lighting Rate (Cents/kWh)		1.576¢ \$7.68	1.576¢ \$11.21	1.576¢ \$20.13	1.576¢ \$31.60		
Base Cost of Energy Related Expense Monthly Base Cost of Energy Related Expense		\$7.68 \$0.64	\$11.21	\$20.13 \$1.68	\$31.60 \$2.63		
LED Annual Energy Usage (kWh)		161	272	643	1,015		
Current Fuel Clause Street Lighting Rate (Cents/kWh)		1.576¢	1.576¢	1.576¢	1.576¢		
Base Cost of Energy Related Expense		\$2.54	\$4.29	\$10.13	\$16.00		
Monthly Base Cost of Energy Related Expense		\$0.21	\$0.36	\$0.84	\$1.33		
Base Cost of Energy Related Expense Savings		\$5.14	\$6.92	\$9.99	\$15.60		
Resource Adjustment Estimated Savings		100W/30-40W	150W/50-75W	250W/110-165W	400W/200-245W		
HPS Annual Energy Usage (kWh)		487	711	1,277	2,005		
Resource Adjustment Street Lighting Rate (Cents/kWh)		0.946¢	0.946¢	0.946¢	0.946¢		
Resource Adjustment Expense		\$4.61	\$6.73	\$12.08	\$18.97		
Monthly Base Cost of Energy Related Expense		\$0.38	\$0.56	\$1.01	\$1.58		
LED Annual Energy Usage (kWh)		161	272	643	1,015		
Resource Adjustment Street Lighting Rate (Cents/kWh)		0.946¢	0.946¢	0.946¢	0.946¢		
Resource Adjustment Expense		\$1.52	\$2.57	\$6.08	\$9.60		
Monthly Base Cost of Energy Related Expense		\$0.13	\$0.21	\$0.51	\$0.80		
Resource Adjustment Expense Savings		\$3.08	\$4.15	\$6.00	\$9.37		

Information Request No. 1a

A30 Service Orders	13,261	2012-14 Average
Percentage of Service Orders that are Fixture Related	91.4%	A30 Fixture SOs as a % of all A30 SOs
No. of Fixture Related Service Orders	12,116	Expected level of fixture driven Service Orders
Percentage of Fixture Related Service Orders Expected to be Eliminated	95.81%	Based on LED Service Orders in West St. Paul Pilot
Reduction in Fixture Related Service Orders	11,608	
Estimated Cost per Fixture Related Service Orders	\$60.19	3-YR Average
Service Order Savings	698,703	

No. of A30 Streetlights	2012 Average	2013 Average	2014 Average	2012-14 Average
70W	314	313	314	314
100W	81,533	81,988	81,731	81,751
150W	21,797	22,044	21,934	21,925
250W	5,537	5,524	5,523	5,528
400W	268	267	266	267
175W	88	88	88	88
Total	109,537	110,225	109,855	109,872

Information Request No. 1a

	2012	2013	2014	2012-14
				Average
Relamp Expense				
Total Relamps	\$525,104	\$669,760	\$473,817	556,227
Customer Owned SL Relamps (A-32)	\$47,075	\$56,161	\$58,415	53,883
Company Owned SL Relamps (A-30)	\$478,030	\$613,599	\$415,402	502,344
	2012	2013	2014	2012-14
No. of A30 Streetlights	Average	Average	Average	Average
70W	314	313	314	314
100W	81,533	81,988	81,731	81,751
150W	21,797	22,044	21,934	21,925
250W	5,537	5,524	5,523	5,528
400W	268	267	266	267
175W	88	88	88	88
Total	109,537	110,225	109,855	109,872

Information Request No. 1b

NSP(M) - Electric Utility - State of North Dakota

Street Lighting Power Costs

Test Year	2015 Non-APL LTG	Notes	
 Peak Cost Transmission Cost Distribution Cost Demand Cost Total Unit Demand Cost per kWh Unit Demand Cost per kW 	\$79 \$74 <u>\$76</u> \$229 1. 407 ¢ \$58.55	From CCOSS From CCOSS From CCOSS	
7 MWH	16,279	From CCOSS	

SPUC 1-001.xlsx 1.b ND 2015TY SVH 5/23/2017 1:19 PM

Information Request No. 1b

NSP(M) - Electric Utility - State of South Dakota

Street Lighting Power Costs

t Year	2013		
		NI (
	LIG	Notes	_
Energy Cost	\$315	From CCOSS	
Baseload Cost	<u>\$132</u>		
Energy + BL	\$447		
MWH	12,524	From CCOSS	
Energy + BL per kWh	3.565¢		
Fuel Assumption in CCOSS	2.847¢		
Non-Fuel Related Energy Cost	0.718¢		
Peak Cost	\$96	From CCOSS	
Transmission Cost	\$71	From CCOSS	
Distribution Cost	<u>\$106</u>	From CCOSS	
Demand Cost Total	\$274		
Unit Demand Cost per kWh	2.185¢		
Unit Demand Cost per kW	\$90.91		
	Baseload Cost Energy + BL MWH Energy + BL per kWh Fuel Assumption in CCOSS Non-Fuel Related Energy Cost Peak Cost Transmission Cost Distribution Cost Demand Cost Total Unit Demand Cost per kWh	Non-APL LTG Energy Cost \$315 Baseload Cost \$132 Energy + BL \$447 MWH 12,524 Energy + BL per kWh 3.565¢ Fuel Assumption in CCOSS 2.847¢ Non-Fuel Related Energy Cost 0.718¢ Peak Cost \$96 Transmission Cost \$71 Distribution Cost \$106 Demand Cost Total \$274 Unit Demand Cost per kWh 2.185¢	Non-APL LTG Notes

SPUC 1-001.xlsx 1.b SD2013TY SVH 5/23/2017 1:19 PM

Information Request No. 1b

[15]/[9]/1000

Docket No. EL17-018 Data Request No. SDPUC-1-001 Attachment A Page 8 of 10

Northern States Power Company, a Minnesota Corporation Electric Operation - State of South Dakota Actual NSP System Fuel Cost with Production Tax Credits and REC Sales Credits Test Year Ending December 2013

Docket No. EL14-058 Page 1 of 1

Line No.	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
FERC 151 Fossil Fuel	\$45,930,917	\$36,174,662	\$39,664,107	\$35,714,843	\$29,187,911	\$30,055,242	\$45,631,501	\$45,410,138	\$36,507,594	\$31,219,451	\$35,144,174	\$52,485,969	463,126,509.0
FERC 518 Nuclear	\$11,120,517	\$10,604,158	\$8,129,429	\$7,928,444	\$7,881,823	\$7,625,738	\$8,175,496	\$11,242,069	\$9,639,647	\$7,811,889	\$7,744,058	\$7,801,662	105,704,930.0
FERC 555 Purchased Energy	\$35,027,255	\$29,234,114	\$32,608,013	\$36,915,144	\$40,825,865	\$39,781,933	\$37,842,727	\$37,604,844	\$39,236,352	\$37,388,155	\$47,321,898	\$39,793,736	453,580,035.8
4a FERC 555 MISO Day 2 Charges	\$8,366,319	\$10,165,928	\$23,699,289	\$20,200,320	\$20,346,311	\$32,197,013	\$32,118,523	\$24,320,465	\$23,044,198	\$23,751,689	\$19,456,194	\$17,180,234	254,846,481.1
4b FERC 555 MISO ASM Charges	\$2,463,279	\$2,987,340	\$1,107,837	\$2,993,845	\$4,308,216	\$2,731,861	\$2,176,112	\$1,760,793	\$2,440,355	\$2,595,581	\$1,154,328	\$4,994,935	31,714,480.5
5. Total System Costs	\$102,908,287	\$89,166,202	\$105,208,675	\$103,752,595	\$102,550,126	\$112,391,786	\$125,944,359	\$120,338,309	\$110,868,146	\$102,766,764	\$110,820,653	\$122,256,536	\$1,308,972,436
[1]+[2]+[3]+[4a]+[4b]													
6. Fuel Cost of Intersystem Sales	\$5,272,759	\$5,459,934	\$162,610	\$2,189,732	\$2,927,370	\$4,659,393	\$4,726,025	\$3,716,520	\$2,716,704	\$2,690,921	\$4,636,470	\$5,361,131	44,519,569.2
7. Net System Costs	\$97,635,528	\$83,706,267	\$105,046,064	\$101,562,864	\$99,622,756	\$107,732,393	\$121,218,334	\$116,621,789	\$108,151,442	\$100,075,843	\$106,184,183	\$116,895,405	\$1,264,452,867
[5]-[6]													
Total System Retail MWh Sales	3,563,112	3,159,377	3,448,324	3,157,203	3,225,574	3,493,391	4,038,901	4,020,210	3,523,186	3,318,269	3,325,584	3,600,312	41,873,443.0
South Dakota Retail MWh Sales	168,002	149,538	164,831	143,761	155,530	172,322	208,484	206,962	177,083	159,644	160,695	173,874	2,040,726
10. South Dakota % of System Retail	4.72%	4.73%	4.78%	4.55%	4.82%	4.93%	5.16%	5.15%	5.03%	4.81%	4.83%	4.83%	4.87%
[9]/[8]x100%													
11. Net System Cost of Fuel Per KWh	\$0.02740	\$0.02650	\$0.03046	\$0.03217	\$0.03089	\$0.03084	\$0.03001	\$0.02901	\$0.03070	\$0.03016	\$0.03193	\$0.03247	\$0.03020
[7]/[8]/1000													
12. South Dakota Monthly Fuel Costs	\$4,603,591	\$3,962,009	\$5,021,247	\$4,624,648	\$4,803,544	\$5,314,238	\$6,257,230	\$6,003,761	\$5,435,917	\$4,814,703	\$5,130,831	\$5,645,341	\$61,617,060
[11]x[9]x1000													
13. Asset Based Margin Sharing	(\$100,680)	(\$49,845)	(\$46,314)	(\$90,835)	(\$46,837)	(\$45,112)	(\$24,623)	(\$94,567)	(\$111,596)	\$21,222	(\$52,384)	(\$6,887)	(\$648,458)
 Non-Asset Based Margin Sharing 		(\$90,881)											(\$90,881)
 Production Tax Credits 	(\$164,092)	(\$118,589)	(\$118,541)	(\$148,926)	(\$169,526)	(\$120,186)	(\$89,012)	(\$105,672)	(\$139,824)	(\$149,302)	(\$141,898)	(\$222,136)	(1,687,704.0)
RECs Sales Credits	(\$507,281)	(\$7,113)	\$0	\$0	\$2,360	\$0	(\$111,667)	(\$100,595)	(\$32,767)	(\$38,534)	(\$287,654)	\$0	(1,083,250.6)
17. SD Fuel Costs with Margins Sharing,													
PTC and REC Sales Credits	\$3,831,538	\$3,695,582	\$4,856,392	\$4,384,887	\$4,589,541	\$5,148,940	\$6,031,928	\$5,702,927	\$5,151,730	\$4,648,089	\$4,648,895	\$5,416,318	\$58,106,766
[12]+[13]+[14+[15]+[16]													
18. In Dollars per KWh	\$0.02281	\$0.02471	\$0.02946	\$0.03050	\$0.02951	\$0.02988	\$0.02893	\$0.02756	\$0.02909	\$0.02912	\$0.02893	\$0.03115	\$0.02847

Pursuant to Commission authorization in the Company's rate case (Docket No. EL-09-009), the Fuel Clause Mechanism is now recovering the entire fuel and purchased energy costs through the monthly Fuel Clause Charge. Unlike the previously used Fuel Cost Adj

Information Request No. 1c

Levelized Annual Revenue Requirement Percentage Calculation

Capital Structure Long Term Debt Short Term Debt Preferred Stock Common Equity Required Rate of Return		Rate 4.8300% 0.6200% 0.0000% 9.2500%	Ratio 45.90% 0.00% 0.00% 54.10%	Pre-tax Weighted Cost 2.2200% 0.0000% 5.0000% 7.2200%	After-Tax Weighted Cost 6.4400%	discount rate	[\$ 1,288,007 \$ 99,180	total to collect from																							
SD Composite Tax ra Book Life 20 Yr MACRS Capital Investment Net Salvage		35.00% 29 100.00% \$ 1,000,000 -35.0%	0.0375	0.0722	0.0668	0.0618	0.0571	0.0529	0.0489	0.0452	0.0446	0.0446	0.0446	0.0446	0.0446	0.0446	0.0446	0.0446	0.0446	0.0446	0.0446	0.0446	0.0223	22	23	24	25	26	27	28	29	30
\$,000	1	Totals	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046
Plant In-service	Boy Eoy Average	-	1,000,000 500,000	1,000,000 1,000,000 1,000,000	1,000,000 1,000,000 1,000,000	1,000,000 1,000,000 1,000,000	1,000,000 1,000,000 1,000,000	1,000,000 1,000,000 1,000,000	1,000,000 1,000,000 1,000,000	1,000,000 1,000,000 1,000,000	1,000,000 1,000,000 1,000,000	1,000,000 1,000,000 1,000,000	1,000,000 1,000,000 1,000,000	1,000,000 1,000,000 1,000,000	1,000,000 1,000,000 1,000,000	1,000,000 1,000,000 1,000,000	1,000,000 1,000,000 1,000,000	1,000,000 1,000,000 1,000,000	1,000,000 1,000,000 1,000,000	1,000,000 1,000,000 1,000,000	1,000,000 1,000,000 1,000,000	1,000,000 1,000,000 1,000,000	1,000,000 1,000,000 1,000,000	1,000,000 1,000,000 1,000,000	1,000,000 1,000,000 1,000,000	1,000,000 1,000,000 1,000,000	1,000,000 1,000,000 1,000,000	1,000,000 1,000,000 1,000,000	1,000,000		1,000,000	1,000,000
Depreciation Reserv	ve Boy		0	23,276	69,828	116,379	162,931	209,483	256,034	302,586	349,138	395,690	442,241	488,793	535,345	581,897	628,448	675,000	721,552	768,103	814,655	861,207	907,759	954,310	1,000,862	1,047,414	1,093,966	1,140,517	1,187,069	1,233,621	1,280,172	1,326,724
	Eoy		23,276	69,828	116,379	162,931	209,483	256,034	302,586	349,138	395,690	442,241	488,793	535,345	581,897	628,448	675,000	721,552	768,103	814,655	861,207	907,759	954,310	1,000,862	1,047,414	1,093,966	1,140,517	1,187,069	1,233,621		1,326,724	
Accumulated Defer	Average red Taxes		11,638	46,552	93,103	139,655	186,207	232,759	279,310	325,862	372,414	418,966	465,517	512,069	558,621	605,172	651,724	698,276	744,828	791,379	837,931	884,483	931,034	977,586	1,024,138	1,070,690	1,117,241	1,163,793	1,210,345	1,256,897	1,303,448	663,362
	Boy		0	4,978	13,952	21,028	26,355	30,057	32,261	33,076	32,610	31,934	31,255	30,578	29,899	29,223	28,543	27,867	27,187	26,511	25,832	25,156	24,476	15,991	(302)	(16,595)	(32,888)	(49,181)	(65,474)	(81,767)	(98,060)	(114,353)
	Eoy Average	-	4,978 2,489	13,952 9,465	21,028 17,490	26,355 23,691	30,057 28,206	32,261 31,159	33,076	32,610 32,843	31,934	31,255 31,594	30,578 30,916	29,899	29,223	28,543 28,883	27,867	27,187	26,511	25,832 26,171	25,156 25,494	24,476	15,991 20,234	7.845	(16,595)	(32,888)	(49,181)	(57,328)	(81,767)	(89,914)	(114,353)	(57,177)
	Average		,	9,465	17,490	23,091	28,200	31,159	32,009	32,043	32,272	31,594	30,916	30,239	29,501	20,003	28,205	27,527	20,849	20,1/1	25,494	24,810	20,234	7,845	(8,448)	(24,741)	(41,034)	(57,328)	(73,021)	(89,914)	(100,207)	(57,177)
Average Rate Base Debt Return			485,873 10,786	943,983 20,956	889,407 19,745	836,653 18,574	785,587 17,440	736,082 16.341	688,021 15,274	641,295 14,237	595,314 13,216	549,440 12,198	503,566 11,179	457,692 10.161	411,819 9.142	365,945 8,124	320,071 7,106	274,197 6.087	228,323 5.069	182,449 4.050	136,575 3.032	90,701 2,014	48,732 1.082	14,569 323	(15,690)	(45,948) (1,020)	(76,207)	(106,466)	(136,724)	(166,983)	(197,241) (4,379)	(106,185) (2,357)
Equity Return			24,294	47,199	44,470	41,833	39,279	36,804	34,401	32,065	29,766	27,472	25,178	22,885	20,591	18,297	16,004	13,710	11,416	9,122	6,829	4,535	2,437	728	(784)	(2,297)	(3,810)	(5,323)	(6,836)	(8,349)	(9,862)	(5,309)
Book Depreciation		1,350,000	23,276	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	23,276
20 Yr MACRS Tax De Removal Costs	epr	1,000,000 350,000	37,500	72,190	66,770	61,770	57,130	52,850	48,880	45,220	44,620	44,610	44,620	44,610	44,620	44,610	44,620	44,610	44,620	44,610	44,620	44,610	22,310		-			-	-	-	-	350,000
SL for Deferred		1,350,000	23,276	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	46,552	23,276
Deferred Taxes		-	4,978	8,973	7,076	5,326	3,702	2,204	815	(466)	(676)	(680)	(676)	(680)	(676)	(680)	(676)	(680)	(676)	(680)	(676)	(680)	(8,485)	(16,293)	(16,293)	(16,293)	(16,293)	(16,293)	(16,293)	(16,293)	(16,293)	114,353
Net Deferred ITC		-	-	-	-	•	-	-	-	-	•	-	-	-	-	-	•	-		-	-	-	-	-	-	-	-	-	-	-	-	-
O&M (input by year) Property Taxes (inp		peratery	- 1	6.100	6.100	6.100	6.100	6.100	6.100	6.100	6.100	6.100	6.100	6.100	6.100	6.100	6.100	6.100	6.100	6.100	6.100	6.100	6.100	6.100	6.100	6.100	6.100	6.100	6 100	6.100	6 100	6.100
Current Tax RR	,,,		8,102.74	16,442	16,869	17,199	17,448	17,613	17,709	17,732	16,704	15,472	14,234	13,002	11,764	10,532	9,293	8,062	6,823	5,592	4,353	3,122	9,797	16,685	15,871	15,056	14,241	13,427	12,612	11,797	10,983	(117,212)
Total Revenue Requ NPV Rev Req LARR LARR%	uirements	\$ 1,288,007 \$ 99,180.06 9.92%	71,437 67,114.88 99,180	146,222 129,063.57 99,180	140,812 116,768.69 99,180	135,583 105,629.93 99,180	130,522 95,533.99 99,180	125,614 86,379.45 99,180	120,850 78,075.41 99,180	116,219 70,540.34 99,180	111,661 63,673.40 99,180	107,114 57,384.85 99,180	102,567 51,624.18 99,180	98,020 46,350.51 99,180	93,472 41,526.02 99,180	88,925 37,115.66 99,180	84,378 33,086.96 99,180	79,831 29,409.90 99,180	75,284 26,056.67 99,180	70,737 23,001.54 99,180	66,189 20,220.72 99,180	61,642 17,692.20 99,180	57,482 15,499.98 99,180	54,096 13,704.30 99,180	51,097 12,161.28 99,180	48,097 10,754.81 99,180	45,098 9,474.02 99,180	42,099 8,308.84 99,180	39,099 7,249.98 99,180	36,100 6,288.82 99,180	33,101 5,417.44 99,180	18,850 2,898.52 99,180

Information Request No. 1d

Northern States Power Company

South Dakota Retail Electric Fuel Clause Charges & Riders Report

	FUE	L COST CH	IARGE (\$/k	(Wh)		
	Col		C&I Demand		0.1	
Residential	C&I Non-Demand	Non-TOD	TOD		Outdoor Lighting	System True- Up of Prior
	11011 201111110	Non-10D	On-Peak	Off-Peak	gg	Months Costs

			2017	7			
FAF Ratio *	1.0124	1.0199	1.0033	1.2090	0.8304	0.7621	
January **	\$0.02093	\$0.02109	\$0.02075	\$0.02500	\$0.01717	\$0.01576	(\$0.00160)
February **	\$0.02093	\$0.02109	\$0.02075	\$0.02500	\$0.01717	\$0.01576	(\$0.00160)
March	\$0.02093	\$0.02109	\$0.02075	\$0.02500	\$0.01717	\$0.01576	(\$0.00160)
April							
May							
June							
July							
August							
September							
October							
November							
December							
YTD Average	\$0.02093	\$0.02109	\$0.02075	\$0.02500	\$0.01717	\$0.01576	(\$0.00160)

^{*} The FAF Ratio has been in effect since July 1, 2015

^{**} Pursuant to the Commission's action on December 6, 2016 in Docket No. EL16-037, Company's monthly fuel clause adjustment has been suspended for 180 days and the charges listed are the same as those that were in effect in December 2016.

			2016	5			
January	\$0.02729	\$0.02749	\$0.02704	\$0.03259	\$0.02238	\$0.02054	\$0.00114
February	\$0.02293	\$0.02310	\$0.02272	\$0.02738	\$0.01881	\$0.01726	(\$0.00292)
March	\$0.02372	\$0.02390	\$0.02351	\$0.02833	\$0.01946	\$0.01786	\$0.00128
April	\$0.01935	\$0.01950	\$0.01918	\$0.02311	\$0.01587	\$0.01457	(\$0.00370)
May	\$0.01868	\$0.01881	\$0.01851	\$0.02230	\$0.01532	\$0.01406	(\$0.00035)
June	\$0.01652	\$0.01665	\$0.01638	\$0.01973	\$0.01355	\$0.01244	(\$0.00415)
July	\$0.02277	\$0.02294	\$0.02257	\$0.02719	\$0.01868	\$0.01714	\$0.00077
August	\$0.02290	\$0.02307	\$0.02269	\$0.02735	\$0.01878	\$0.01724	(\$0.00144)
September	\$0.02798	\$0.02819	\$0.02773	\$0.03342	\$0.02295	\$0.02106	\$0.00332
October	\$0.02492	\$0.02510	\$0.02469	\$0.02976	\$0.02044	\$0.01876	(\$0.00103)
November	\$0.02329	\$0.02346	\$0.02308	\$0.02781	\$0.01910	\$0.01753	\$0.00232
December	\$0.02093	\$0.02109	\$0.02075	\$0.02500	\$0.01717	\$0.01576	(\$0.00160)
YTD Average	\$0.02261	\$0.02278	\$0.02240	\$0.02700	\$0.01854	\$0.01702	(\$0.00053)

OTHER RIDERS								
	Effective Since	\$ / kWh						
TCR - Transmission Cost Recovery Rider	1/1/2017	\$0.003627						
ECR - Environmental Cost Recovery Rider Factor	8/1/2012	\$0.000000						
DSM - Demand Side Management Cost Adjustment Factor	1/1/2017	\$0.000504						
Infrastructure Rider Factor	1/1/2017	\$0.005332						
IRA - Interim Rate Surcharge	7/1/2015	0.00%						
	Previous							
TCR - Transmission Cost Recovery Rider	1/1/2016	\$0.002688						
ECR - Environmental Cost Recovery Rider Factor	1/2/2012	\$0.000000						
IRA - Interim Rate Surcharge	1/1/2015	19.23%						
Infrastructure Rider Factor	1/1/2016	\$0.004806						
DSM - Demand Side Management Cost Adjustment Factor	1/1/2016	\$0.000448						