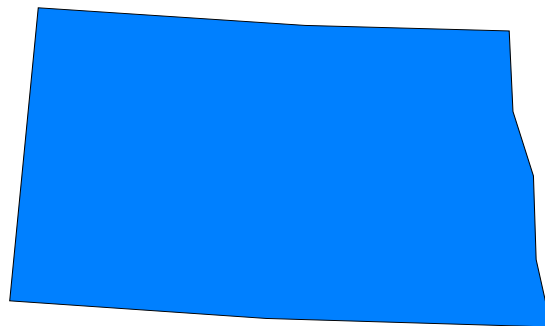


ANNUAL REPORT
OF
NORTHERN STATES POWER COMPANY
(A MINNESOTA CORPORATION)
TO THE
NORTH DAKOTA PUBLIC SERVICE COMMISSION
FOR THE YEAR ENDING
DECEMBER 31, 2016

North Dakota Jurisdiction
Electric Utility



2016

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Northern States Power Company

Electric Utility - North Dakota

(Dollars In Thousands)

I. RETURN ON EQUITY (ROE)

<u>Actual Return on Equity (ROE)</u>	<u>2016</u>	<u>2015</u>
1 Operating Income from Electric Operations (E-2):	\$38,025	\$33,713
2 Average Regulated Rate Base (E-3):	\$540,927	\$514,809
3 Rate of Return on Rate Base (ROR) (line 1 / line 2):	7.03%	6.55%
4 Weighted Cost of Debt (E-4):	2.22%	2.25%
5 Weighted Cost of Preferred Stock (E-4):	0.00%	0.00%
6 % of Equity in Capital Structure (E-4):	52.61%	52.76%
7 Return on Equity (ROE):	9.14%	8.15%

<u>ROE, Normalized for Weather Impact on Sales</u>	<u>2016</u>	<u>2015</u>
8 Operating Income from Electric Operations:	\$38,025	\$33,713
9 Impact of weather on Mwh Sales:	(39,549)	(21,111)
10 Impact of weather on Electric Operating Income: ¹	(\$1,262)	(\$622)
11 Weather-Normalized Operating Income:	\$39,287	\$34,335
12 Average Regulated Rate Base:	\$540,489	\$514,593
13 Weather-Normal Rate of Return on Rate Base (ROR):	7.27%	6.67%
14 Weather-Normalized Return on Equity (ROE):	9.60%	8.38%

¹ The weather impact estimate includes a demand component in addition to sales.

Northern States Power Company

Electric Utility - North Dakota

(Dollars In Thousands)

II. OPERATING INCOME

<u>Line</u>	<u>Item</u>	<u>2016</u> <u>Total NSP</u>	<u>2016</u> <u>N.D. Juris.</u>	<u>N. D. %</u>	<u>2015</u> <u>N.D. Juris.</u>	<u>Annual</u> <u>Change</u>
<u>Operating Revenues:</u>						
1	Residential	1,309,339	78,298	6.0%	82,172	-4.7%
2	Small Comm. & Ind.	1,511,565	98,996	6.5%	101,810	-2.8%
3	Large Comm. & Ind.	685,042	26,257	3.8%	27,904	-5.9%
4	Public Street & Highway Ltg	26,251	1,603	6.1%	1,635	-1.9%
5	Other Sales to Publ Auth	<u>9,130</u>	<u>1,360</u>	<u>14.9%</u>	<u>1,356</u>	<u>0.3%</u>
	Total Retail	3,541,328	206,514	5.8%	214,877	-3.9%
6	Interdepartmental	653	0	0.0%	0	*
7	Sales for Resale	80,888	5,157	6.4%	7,687	-32.9%
8	Interchange Agreement	475,534	29,717	6.2%	29,954	-0.8%
9	Other	<u>249,682</u>	<u>16,320</u>	<u>6.5%</u>	<u>14,149</u>	<u>15.3%</u>
10	Total Revenues:	4,348,085	257,708	5.9%	266,667	-3.4%
<u>Operating Expenses:</u>						
11	Fuel & Purchased Energy	1,079,614	68,499	6.3%	76,884	-10.9%
12	Production	755,872	46,977	6.2%	50,193	-6.4%
13	Transmission	355,752	21,953	6.2%	19,777	11.0%
14	Distribution	110,969	6,886	6.2%	6,319	9.0%
15	Customer Billing	55,996	3,307	5.9%	4,198	-21.2%
16	Customer Service	138,673	68	0.0%	425	-84.1%
17	Sales & Marketing	1	0	5.7%	0	-30.3%
18	Admin. & General	233,789	15,380	6.6%	15,462	-0.5%
19	Depreciation & Amortization	584,494	33,004	5.6%	32,204	2.5%
20	Property Taxes	193,728	10,367	5.4%	9,404	10.2%
21	Payroll & Other Taxes	29,285	1,875	6.4%	2,014	-6.9%
22	Income Taxes	0	0	*	0	*
23	Deferred Income Taxes & ITC	<u>188,355</u>	<u>11,367</u>	<u>6.0%</u>	<u>16,074</u>	<u>-29.3%</u>
24	Total Expenses:	3,726,528	219,683	5.9%	232,954	-5.7%
25	Regulated Operating Income	621,557	38,025	6.1%	33,713	12.8%

Percentage calculations based on whole numbers

Northern States Power Company
Electric Utility - North Dakota

(Dollars In Thousands)

III. AVERAGE RATE BASE

<u>Line</u>	<u>Item</u>	<u>2016</u> <u>Total NSP</u>	<u>2016</u> <u>N.D. Juris.</u>	<u>N. D. %</u>	<u>2015</u> <u>N.D. Juris.</u>	<u>Annual</u> <u>Change</u>
1	Plant in Service	19,083,223	1,135,600	6.0%	1,085,399	4.6%
2	Accumulated Depreciation	<u>8,343,963</u>	<u>490,686</u>	<u>5.9%</u>	<u>476,534</u>	<u>3.0%</u>
3	Net Plant in Service	10,739,260	644,914	6.0%	608,865	5.9%
4	Plant Held for Future Use	0	0	*	0	*
5	Construct Work in Progress	43,941	2,719	6.2%	2,040	33.3%
6	Materials and Supplies	208,146	12,870	6.2%	11,066	16.3%
7	Fuel Stocks	90,512	5,771	6.4%	6,140	-6.0%
8	Prepayments & Other Rate Base	141,068	5,865	4.2%	6,745	-13.0%
9	Customer Deposits	(105,027)	(146)	0.1%	(176)	-17.1%
10	Cash Working Capital	0	0	*	0	*
11	Other Rate Base ¹	8,246	1,125	13.6%	243	363.9%
12	Accum. Deferred Taxes	<u>(2,348,753)</u>	<u>(132,191)</u>	<u>5.6%</u>	<u>(120,114)</u>	<u>10.1%</u>
13	Total Other Rate Base	<u>(1,961,867)</u>	<u>(103,987)</u>	<u>5.3%</u>	<u>(94,056)</u>	<u>10.6%</u>
14	Total Average Rate Base	8,777,393	540,927	6.2%	514,809	5.1%

¹ Includes deferred assets and liabilities such as accrued vacations, post-retirement medical benefits (FASB 106), post employment benefits (FASB 112), unfunded pension liability, environmental cleanup, severance accrual, etc.
Percentage calculations based on whole numbers

Northern States Power Company

Electric Utility - North Dakota

(Dollars In Thousands)

IV. COST OF CAPITAL

2016 Actual

<u>Line</u>	<u>Item</u>	<u>Amount</u>	<u>% of Total</u>	<u>Cost</u>	<u>Weighted Cost</u>
1	Long-Term Debt	\$4,681,618	46.54%	4.74%	2.21%
2	Short-Term Debt	<u>\$85,083</u>	<u>0.85%</u>	<u>1.22%</u>	<u>0.01%</u>
3	Total Debt	\$4,766,701	47.39%	4.68%	2.22%
4	Preferred Stock	\$0	0.00%	0.00%	0.00%
5	Common Equity	<u>\$5,292,680</u>	<u>52.61%</u>	<u>9.14%</u>	4.81%
6	Total Equity	\$5,292,680	52.61%		
7	Total Capital	\$10,059,381	100.00%		7.03%

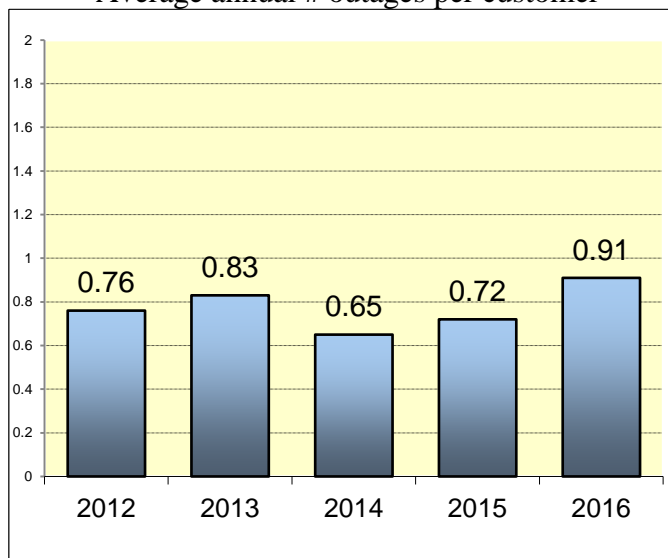
2016 Normalized

<u>Line</u>	<u>Item</u>	<u>Amount</u>	<u>% of Total</u>	<u>Cost</u>	<u>Weighted Cost</u>
8	Long-Term Debt	\$4,681,618	46.54%	4.74%	2.21%
9	Short-Term Debt	<u>\$85,083</u>	<u>0.85%</u>	<u>1.22%</u>	<u>0.01%</u>
10	Total Debt	4,766,701	47.39%	4.68%	2.22%
11	Preferred Stock	\$0	0.00%		0.00%
12	Common Equity	<u>\$5,292,680</u>	<u>52.61%</u>	<u>9.60%</u>	5.05%
13	Total Equity	\$5,292,680	52.61%		
14	Total Capital	\$10,059,381	100.00%		7.27%

**Northern States Power Company
Electric Utility - North Dakota
Outage Frequency and Duration Indices - 2016**

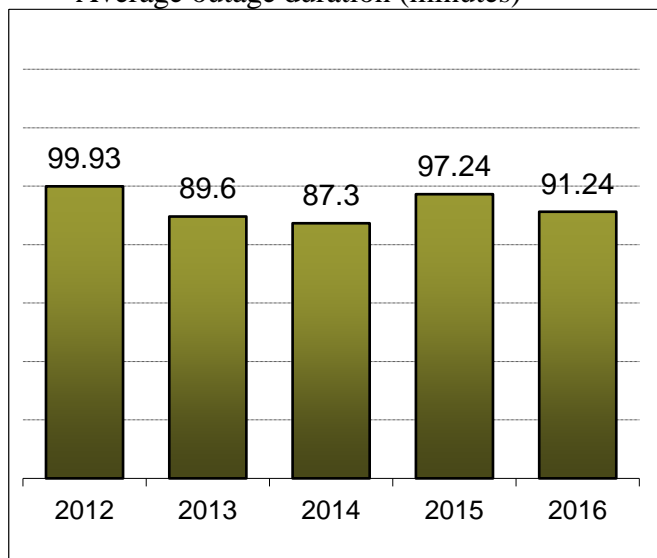
**System Avg Interruption Frequency Index
(SAIFI)**

Average annual # outages per customer



**Customer Avg Interruption Duration Index
(CAIDI)**

Average outage duration (minutes)



SAIFI (Interruption Frequency) - Largest Five Substations

	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>5 Yr. Avg</u>
Cass County (Fgo)	0.71	0.90	0.36	0.42	0.56	0.59
Souris (Mnt)	0.36	1.08	0.40	0.44	0.75	0.61
Nordic (GF)	1.01	0.58	0.41	0.88	0.51	0.68
Red River (Fgo)	0.70	0.86	0.78	0.93	1.29	0.91
Gateway (GF)	0.59	0.54	1.74	0.62	1.60	1.02

CAIDI (Interruption Duration) - Largest Five Substations

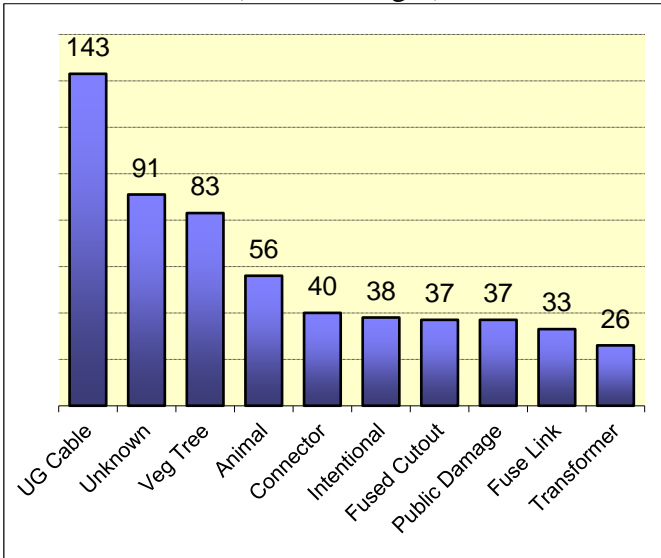
	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>5 Yr. Avg</u>
Gateway (GF)	89.1	100.3	54.9	75.1	71.5	78.2
Red River (Fgo)	110.1	88.7	88.7	75.8	98.2	92.3
Nordic (GF)	74.1	104.7	97.6	98.8	115.0	98.0
Souris (Mnt)	105.8	72.4	80.5	166.3	67.1	98.4
Cass County (Fgo)	78.6	109.3	158.7	104.7	120.9	114.4

Data reflects normalized outages lasting 5 minutes or longer. In 2016 one Major Event Day (May 22) was excluded.

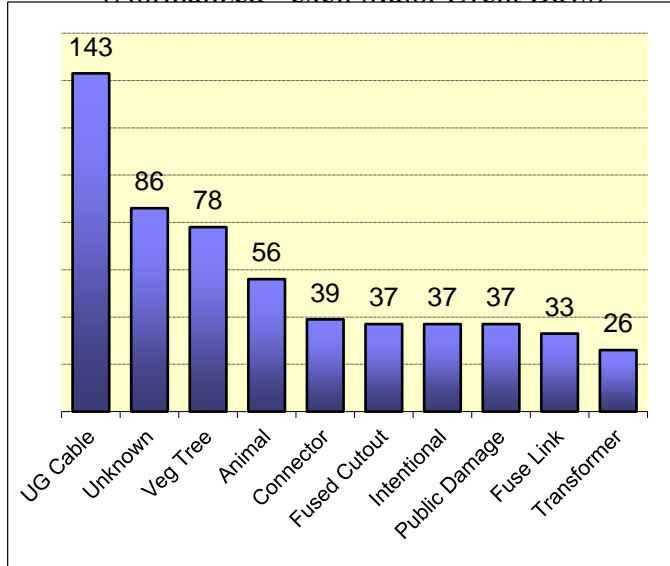
**Northern States Power Company
Electric Utility - North Dakota
Most Common Outage Causes - 2016**

Top 10 Outage Causes

(Actual outages)



(Normalized - excl. Major Event Days)

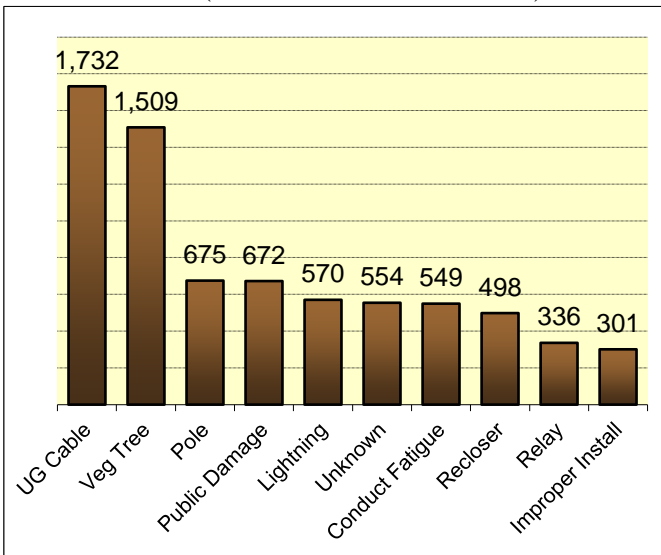


Total outage events: 665

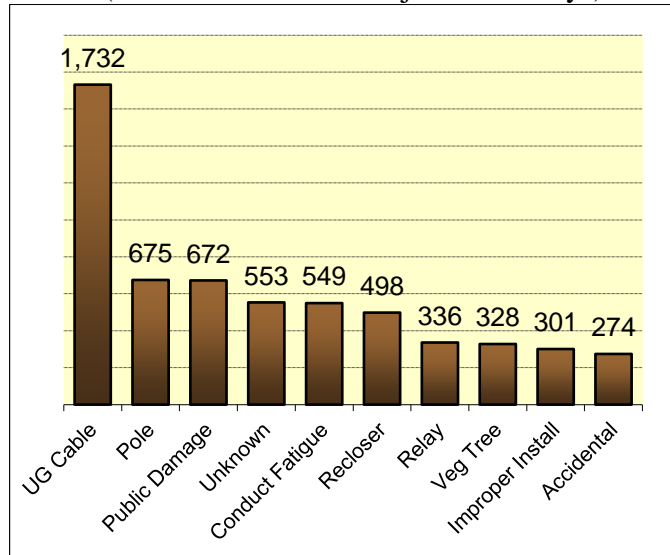
Top 10 Causes of Lengthy or Wide-spread Interruptions

(measured in customer-minutes without power - 000's)

(Actual customer-minutes)



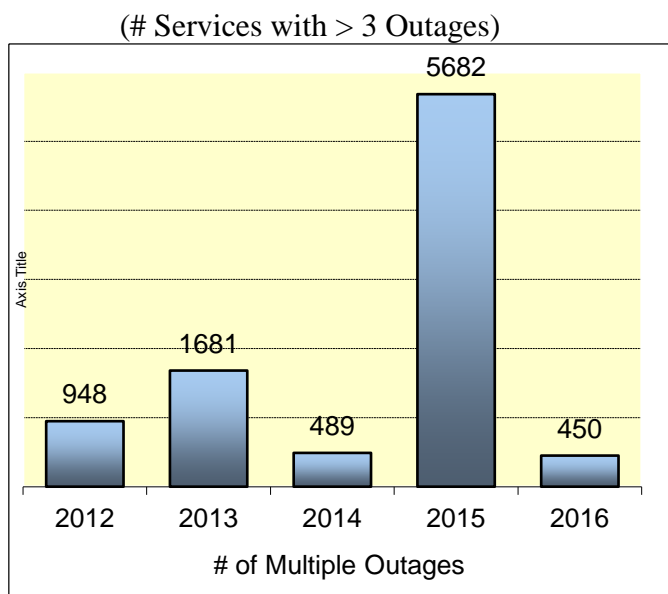
(Normalized - excl. Major Event Days)



Note: Date reflects outages lasting 5 minutes or longer.

**Northern States Power Company
Electric Utility - North Dakota
CEMI, Feeder Outages, and Underground Cable Failures - 2016**

**Customers Experiencing Multiple Interruptions
(CEMI)**



Note: The 2012 CEMI count is an approximation.

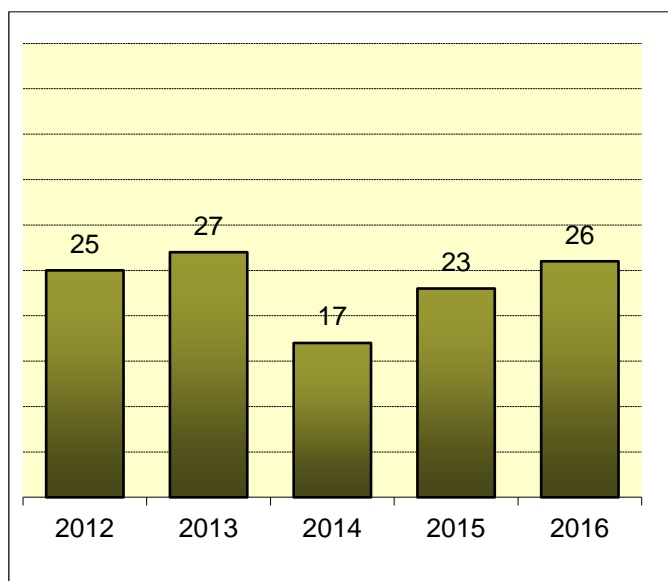
Breakdown of 2016 CEMI Levels

# Outages	Customers
4	382
5	32
6+	36
	450

CEMI Credits Issued

2013	\$84,050
2014	\$24,650
2015	\$284,100
2016	\$22,350

Feeder-Level Outages



Underground Cable Failures

Year	UG Cable Failures
2012	139
2013	159
2014	155
2015	147
2016	143

(reflects primary, secondary cable failures)

Data reflects outages lasting 5 minutes or longer; Major Event Day (May 22) & public damage events excluded.

**Northern States Power Company
Electric Utility - North Dakota
Reliability Performance Plan Results**

A. SAIDI (System Average Interruption Duration Index)

	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>
1 Excellence Threshold (minutes):	57.0	57.0	57.0	57.0
2 Actual SAIDI Result (minutes):	74.3	57.1	69.7	83.0
3 Base Award:	\$0	\$0	\$0	\$0
4 Authorized Return on Equity:	9.75%	10.00%	10.00%	10.25%
5 Actual Return on Equity:	9.19%	8.99%	8.15%	9.14%
6 Revenue Deficiency:	\$1,856,153	\$3,910,149	\$8,121,692	\$5,047,170
7 Final SAIDI Award:	\$0	\$0	\$0	\$0

B. CEMI (Customers Experiencing Multiple Interruptions)

	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>
8 # Customers receiving credits:	1,681	489	5,682	450
9 Total CEMI Payout:	\$84,050	\$24,650	\$284,100	\$22,350

C. Reliability Satisfaction Survey

	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016*</u>
10 % Customers Rating "Positive" (6-10):	97%	98%	98%	95%
11 % Customers Rating "Excellent" (8-10):	86%	88%	91%	82%

* 2016 survey results are based on an extrapolation of XE Relationship scores using JDPower survey results, and are not directly comparable to past results. The Company stopped conducting its "relationship" surveys in 2015.

Xcel Energy

Electric Utility - State of North Dakota

2016 RELIABILITY PLAN SUMMARY

Ongoing Reliability Improvement Efforts

Overhead System Upgrades – 2017 Budget: \$1,800,000

Xcel Energy's electric overhead system capital budget includes replacing failed devices, installing upgrades so the "backbone system" can continue to serve new customers, and making improvements to enhance reliability. This budget funds maintenance of our Reliability Exception Monitoring System ("REMS"), a computer outage tracking and reporting system. REMS prompts engineering reviews of our system by flagging devices that have tripped more than twice in a rolling 12 month period. Following such a review, corrective actions are identified and implemented where appropriate.

These funds also reflect efforts to expand automation, add lightning arresters, and mitigate pole fires as part of the 2016 reliability enhancement plan (see below).

Infrared scanning is performed on our ND system. This process includes early detection of failing components within our overhead distribution system. The infrared scanner identifies "hot spots" on equipment so they can be replaced prior to failure.

Distribution pole testing is also performed on our ND system. Xcel Energy's pole replacement plan includes an O&M expense for testing 1,600 wood distribution poles in North Dakota. The testing methodology conforms to an industry standard procedure. If a pole is identified as having strength characteristics below acceptable standards, the pole is scheduled for replacement or reinforcement.

Underground System Upgrades - \$3,063,000

In 2017, Xcel Energy is continuing its efforts to upgrade its underground cable system in North Dakota. About \$680,000 will be spent replacing cables that have failed but for which repairs are not a viable option.

Underground system upgrades also reflect the Company's accelerated efforts to locate and remove all existing non-jacketed 500 MCM cable. This effort began as part of an initial 3 year (2012-2014) program committed to in a prior Settlement (Case No. PU-10-657). In a more recent rate Settlement (Case No. PU-12-813) the project timeline was extended. In 2016, the company outlined a reliability enhancement plan to complete the removal (see below).

2016-18 Reliability Enhancement Plan - \$5,300,000

In 2017 the Company will continue implementation of its 2016-18 reliability enhancement commitment to the NDPSC. The plan includes: 1) Complete removal of known non-jacketed 500 MCM underground cable, 2) nearly doubling the number of Intelliteam switches in ND, 3) retrofitting 130 poles with fiberglass cross-arms and taller insulators to combat pole fires, and 4) installing additional pole top and 3-phase lightning arrestor sets on all 18 Fargo mainline feeders along with areas in Minot and Grand Forks.

Northern States Power Company

Electric Utility - North Dakota

I. SALES AND CUSTOMER DATA

Electric Utility (N. D. Jurisdiction)

<u>Line</u>	<u>Customers (@ Dec)</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>
1	Residential	80,623	80,245	79,206	78,156	77,231
2	Small C & I	12,746	12,705	12,475	12,317	12,182
3	Large C & I	24	22	18	20	21
4	PSHL/OSPA	<u>375</u>	<u>351</u>	<u>342</u>	<u>330</u>	<u>322</u>
5	Total Retail	93,768	93,323	92,041	90,823	89,756
<u>Line</u>	<u>Mwh Sales</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>
6	Residential	744,260	770,530	818,018	827,062	758,810
7	Small C & I	1,077,523	1,099,372	1,117,581	1,108,370	1,069,443
8	Large C & I	362,964	349,571	335,058	335,530	349,595
9	PSHL/OSPA	<u>27,992</u>	<u>28,450</u>	<u>29,944</u>	<u>30,582</u>	<u>29,553</u>
10	Total Retail	2,212,739	2,247,923	2,300,601	2,301,544	2,207,401
11	Ave. ¢/Kwh	9.28¢	9.59¢	9.08¢	8.86¢	8.10¢
12	Ave. Res. Mo. Usage (kwh)	769	800	861	882	819
13	Ave. Res. Monthly Bill	\$80.49	\$85.59	\$86.01	\$86.26	\$74.46

Northern States Power Company Electric Utility - North Dakota

II. AFFILIATED TRANSACTION SUMMARY

			North Dakota Jurisdiction Electric and Gas Totals (1)	
Affiliate Name	Services Rendered	Expense (2)	Revenue (3)	
1	NSP Wisconsin	Electric and Gas Utility	10,571,618	30,342,997
2	Public Service of Colorado	Electric and Gas Utility	4,662	9,034
3	Southwestern Public Service	Electric Utility	626	22,487
4	Hayden Joint Venture	Electric Utility	-	-
5	Xcel Energy Services	Xcel Energy Inc. Service Company	113,981,616	81,987,762
6	Xcel Energy, Inc.	Engineering services	(19,238,719)	1,227
			105,319,803	112,363,507

Notes:

- (1) The amounts allocated to North Dakota electric and gas jurisdictions represent an estimate based on an overall allocation factor applied to the revenues and expenses for each affiliate. To derive the actual amounts by jurisdiction would require an allocation of each transaction by account number and would require significant analysis and expense to perform.
- (2) Expense to North Dakota electric and gas jurisdictions. Revenue to affiliate for services provided to NSP (MN)
- (3) Revenue to North Dakota electric and gas jurisdictions. Expense to the affiliate for services provided to the affiliate by NSP (MN).

Northern States Power Company Electric Utility - North Dakota

III. AFFILIATED TRANSACTION ALLOCATION DETAIL

	<u>Total Expense</u>	<u>Total Revenue</u>	<u>Elec %</u>	<u>Gas %</u>	<u>ND Elec % (Customers)</u>	<u>ND Gas % (Customers)</u>
NSP Wisconsin	\$ 262,647	\$ 9,181,100	92.2457%	7.7543%	6.4296%	10.7874%
PSCo	72,515	140,501	100.0000%	0.0000%	6.4296%	0.0000%
SPS	9,735	349,734	100.0000%	0.0000%	6.4296%	0.0000%
Hayden Joint Venture	0	0				
XES	1,684,245,750	1,211,489,582	92.2457%	7.7543%	6.4296%	10.7874%
XEI	(299,221,089)	19,090	100.0000%	0.0000%	6.4296%	0.0000%
	\$ 1,385,369,557	\$ 1,221,180,008				

Notes:

Allocation of Revenues & Expenses between NSP Minnesota and Affiliates

Common Allocation Method: Labor

	<u>Electric</u>	<u>Gas</u>		
Utility Labor Allocator	92.2457%	7.7543%	Load Dispatch	11.1931%
ND Jur. Customer Allocator	6.4296%	10.7874%	Design Day	12.0146%

Factor Formula: ((Util Elec)*ND Jur Ele)+((Util Gas)*ND Jur Gas) = 6.7675%

Affiliated Transactions between Minnesota and Wisconsin (Interchange Agreement)

	<u>Total Revenue</u>	<u>ND Alloc.</u>	<u>Total Expense</u>	<u>ND Alloc.</u>	<u>Alloc Method</u>	<u>ND Alloc %</u>
Fixed	\$239,774,695	\$14,796,017	\$46,601,901	\$2,875,710	Demand	6.1708%
Variable	\$181,754,204	\$11,588,466	\$16,415,715	\$1,046,650	Energy	6.3759%
Transmission	\$54,005,161	\$3,332,550	\$107,465,543	\$6,631,484	Demand	6.1708%
Electric Total	\$475,534,059	\$29,717,034	\$170,483,158	\$10,553,843		

Gas SCADA Agreement

	<u>Total Rev</u>	<u>ND Alloc.</u>	<u>Alloc Method</u>	<u>ND Alloc %</u>
SCADA	41,373	4,631	Load Dispatch	11.1931%