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April 4, 2019

VIA ELECTRONIC
AND U.S. MAIL

Steven M. Kahl, Executive Secretary
North Dakota Public Service Commission
Department 408
600 East Boulevard Avenue
Bismarck, ND 58505-0480

Re: Summary Report of 2018 Meter Testing Results

Dear Mr. Kahl:

In accordance with sections 69.09.01.16 and 69.09.02.28 of the North Dakota Administrative Code, Northern States Power Company, an Xcel Energy company with operations in North Dakota, encloses summary results of the 2018 testing of the Company's North Dakota electric and natural gas meters.

A summary of the Company's 2018 electric meter testing results is provided in Attachment A to this filing. Note that as a result of a 2015 Commission Staff review of our meter testing tariff, it was recommended the Company include a more detailed report of our electric meter random test results for meters within the NSP-Minnesota operating company (serving the states of Minnesota, North Dakota, and South Dakota). That information is included in Attachment B. Attachment C provides a summary of our 2018 natural gas meter testing results.

Please call or email me if you have any questions about the information provided.

Sincerely,

A handwritten signature in blue ink that reads 'David H. Sederquist'.

DAVID H. SEDERQUIST
SR. REGULATORY CONSULTANT

Enclosures

**Xcel Energy - State of North Dakota
 Electric Meter Testing
 Summary of 2018 Results**

Meters	Acceptable ¹		Slow		Fast		No Register		
	#	%	#	%	#	%	#	%	
Random Sample Tests									
Self-contained Single & Polyphase	176	175	99.4%	0	0.0%	0	0.0%	1	0.6%
Transformer-rated Single & Polyphase	52	52	100.0%	0	0.0%	0	0.0%	0	0.0%
Total Random Tests	228	227	99.6%	0	0.0%	0	0.0%	1	0.4%
Periodic Tests									
Transformer-rated Polyphase (>600V) ²	32	32	100.0%	0	0.0%	0	0.0%	0	0.0%
Transformer-rated Polyphase (>1 MW) ³	46	46	100.0%	0	0.0%	0	0.0%	0	0.0%
Total Periodic Tests	78	78	100.0%	0	0.0%	0	0.0%	0	0.0%
2018 Electric Meter Tests:	306	305	99.7%	0	0.0%	0	0.0%	1	0.3%

¹ Meters that test within acceptable tolerance have an average error within plus or minus 2% of accurate

² Meters in substations on primary services above 600 volts

³ Meters with demands greater than 1 MW during the previous calendar year

See Section 3.1 *Metering and Testing* in Xcel Energy's North Dakota Electric Rate Book (NDPSC No. 2) for meter testing criterium and process.

Lots	Description (OPCO, Random Test, Manuf, Model, Test Code)	Manufacturer	Model	Form	Lot Size	Sample size ANSI_ASQ_Z1_9 Inspection Lev II	Meters Requested	# of Meters Tested	Full Load Sigma	Full Load Bar-x	Full Load Est. % Defect	Max. Allowable % Defect	Full Load Pass/Fail
573	MN,RT,ABB,D5S,AC,SN>79200000	ABB Power	D5S	2S	1,770	50	54	51	0.258	99.869	0.000	5.21	Pass
882	MN,RT,SCHLUM,J5S,IF	Schlumberger	J5S	2S	75,478	150	156	151	0.243	99.938	0.000	4.42	Pass
884	MN,RT,SCHLUM,J5S,LY	Schlumberger	J5S	4S	8	3	5	3	0.146	100.343	0.000	7.59	Pass
1077	MN,RT,SCHLUM,SL12S,MP	Schlumberger	SL12S	12S	2,928	50	54	51	0.244	100.325	0.000	5.21	Pass
1079	MN,RT,ABB,AB1,AI	ABB Power	AB1	1S	2,057	50	54	50	0.214	100.084	0.000	5.21	Pass
8001	MN,RT,SCHLUM,J4ES,AF	Schlumberger	J4ES	2S	1,054	35	40	38	0.397	100.163	0.000	5.58	Pass
8004	MN,RT,ABB,ABS-5U,MP	ABB Power	ABS-5U	12S	41,746	150	156	150	0.25	100.145	0.000	4.42	Pass
8005	MN,RT,ABB,AB1,JW	ABB Power	AB1	3S	7	3	5	5	0.172	100.034	0.000	7.59	Pass
8006	MN,RT,ABB,AB1,AG	ABB Power	AB1	4S	122	10	12	10	0.232	99.904	0.000	7.26	Pass
8015	MN,RT,L&G,MTN12S,MP	Landys & Gyr	VMW65E	12S	4,643	75	80	76	0.168	99.866	0.000	4.83	Pass
8016	MN,RT,SCHLUM,S12S,MP	Schlumberger	S12S	12S	6,043	75	80	76	0.253	100.215	0.000	4.83	Pass
8018	MN,RT,ABB,D4S5U,MP	ABB Power	J4S	12S	4,353	75	80	76	0.323	100.214	0.000	4.83	Pass
8019	MN,RT,ABB,D5S5U,MP	ABB Power	J5S	12S	11	3	5	4	0.143	100.160	0.000	7.59	Pass
8561	MN,RT,LANDIS&GYR,MQS	Landys & Gyr	VMW65E	3S	293	20	23	20	0.288	99.927	0.000	6.18	Pass
8731	MN,RT,S,SL5S,BW,FM14	Schlumberger	SL5S	14S	56	7	9	8	0.372	100.889	0.000	8.4	Pass
8734	MN,RT,D,MSE,AF,FM2S	Landys & Gyr	V65S	2S	107	10	12	11	0.198	100.090	0.000	7.26	Pass
8735	MN,RT,D,MS2SE,AF,FM2S	Landys & Gyr	SL5S	2S	23	4	6	6	0.186	100.085	0.000	10.88	Pass
8743	MN,RT,S,J5ES,AF,FM2S	Schlumberger	J5ES	2S	69	7	9	7	0.445	99.893	0.000	8.4	Pass
8745	MN,RT,W,A1D,TR,FM3S	ABB Power	A1D	3S	85	7	9	8	0.028	100.008	0.000	8.4	Pass
8747	MN,RT,W,A1D,TE,FM16S	ABB Power	A1D	16S	11,483	100	105	100	0.055	99.987	0.000	4.67	Pass
8748	MN,RT,W,A1D,TX,FM12S	ABB Power	A1D	12S	797	35	40	37	0.036	99.986	0.000	5.58	Pass
8753	MN,RT,W,A1R,KZ,FM9S	ABB Power	A1R	9S	32	5	7	5	0.143	100.076	0.000	9.8	Pass
8756	MN,RT,W,A1D,RJ,FM4S	ABB Power	A1D	4S	550	35	40	36	0.058	100.047	0.000	5.58	Pass
8763	MN,RT,S,S2S,MP,FM12S	Schlumberger	S2S	12S	405	25	29	26	0.303	99.940	0.000	5.98	Pass
8773	MN,RT,W,A1R+,Y8,FM35S	ABB Power	A1R+	35S	60	7	9	7	0.03	99.964	0.000	8.4	Pass
8779	MN,RT,G,V65S,BW,FM14S	General Electric	V65S	14S	32	5	7	7	0.327	99.929	0.000	9.8	Pass
8785	MN,RT,W,A1R-AL,ON,FM5S	ABB Power	A1R-AL	5S	3	3	3	3	0.059	100.003	0.000	7.59	Pass
8787	MN,RT,W,A1T+,Y1,FM16S	ABB Power	A1T+	16S	94	10	12	12	0.147	99.966	0.000	7.26	Pass
8834	MN,RT,E,A3R-AL,BA,X8,FM6/36S	Elster	A3R-AL	6S	658	35	40	36	0.042	99.982	0.000	5.58	Pass
8837	MN,RT,W,A1R+,BA,FM6S	ABB Power	A1R+	6S	144	10	12	10	0.059	99.959	0.000	7.26	Pass
8849	MN,RT,D,AL,NX,FM2S	Landys & Gyr	AL	2S	87,249	150	156	151	0.094	100.030	0.000	4.42	Pass
8850	MN,RT,D,AL,TX,FM12S	Landys & Gyr	AL	12S	28,390	100	105	103	0.087	100.070	0.000	4.67	Pass
8857	MN,RT,D,AL,ALF,NY,FM2S	Landys & Gyr	AL (F)	2S	1,971	50	54	52	0.102	100.017	0.000	5.21	Pass
8868	MN,RT,D,AL,ALF,TR,FM3S	Landys & Gyr	AL (F)	3S	43	5	7	5	0.048	100.086	0.000	9.8	Pass
8871	MN,RT,D,AL,ZS,FM1S	Landys & Gyr	AL	1S	427	25	29	25	0.063	100.066	0.000	5.98	Pass
8899	MN,RT,I,S,C1S,C1SC,C1SRC,2B,FM1S	Itron	C1S (C,RC)	1S	2,230	50	54	51	0.111	99.950	0.000	5.21	Pass
8901	MN,RT,E,W,A1T+,A1TL+,NX,FM2S	Elster	A1T+, A1TL+	2S	10,532	100	105	101	0.115	99.962	0.000	4.67	Pass
8902	MN,RT,E,A3R,A3RL,A3T,A3TL,NX,FM2S	Elster	A3R (L), A3T (L)	2S	4,375	75	80	76	0.059	99.988	0.000	4.83	Pass
8903	MN,RT,E,W,AB1,AC,FM2	Elster	AB1	2S	300,702	200	209	202	0.292	100.047	0.000	4.39	Pass
8904	MN,RT,I,S,C1S,C1SC,C1SRC,1N,FM2S	Itron	C1S (C,RC)	2S	492,831	200	209	202	0.124	100.051	0.000	4.39	Pass
8905	MN,RT,S,J4S,AC,IF,FM2S	Schlumberger	J4S	2S	21,003	100	105	102	0.932	99.945	3.029	4.67	Pass
8906	MN,RT,E,W,A1T+,NY,TU,FM2S	Elster	A1T+	2S	2,207	50	54	53	0.114	99.987	0.000	5.21	Pass
8907	MN,RT,E,A3RL,A3R,A3T,A3TL,NY,FM2S	Elster	A3R (L), A3T (L)	2S	428	25	29	25	0.813	99.826	1.099	5.98	Pass
8908	MN,RT,I,C1S,C1SC,2J,FM2S	Itron	C1SC	2S	4,399	75	80	79	0.105	100.054	0.000	4.83	Pass
8909	MN,RT,W,A1T+,A1TL+,TR,FM3S	ABB Power	A1T+, A1TL+	3S	138	10	12	11	0.051	100.036	0.000	7.26	Pass
8910	MN,RT,E,A3RL,A3R,A3T,A3TL,TR,FM3S	Elster	A3R (L), A3T (L)	3S	60	7	9	8	0.071	100.018	0.000	8.4	Pass
8911	MN,RT,I,C1S,C1SC,2F,FM3S	Itron	C1SC	3S	1,415	50	54	51	0.142	100.046	0.000	5.21	Pass

Lots	Description (OPCO, Random Test, Manuf, Model, Test Code)	Manufacturer	Model	Form	Lot Size	Sample size ANSI_ASQ_Z1_9 Inspection Level II	Meters Requested	# of Meters Tested	Full Load Sigma	Full Load Bar-x	Full Load Est. % Defect	Max. Allowable % Defect	Full Load Pass/Fail
8912	MN,RT,E,W,A1T+,A1TL+,RJ,FM4S	Elster	A1T+, A1TL+	4S	3,078	50	54	51	0.115	99.984	0.000	5.21	Pass
8914	MN,RT,I,C1SRC,C1SC,2G,FM4S	Itron	I70S, C1SC, C1SRC	4S	1,929	50	54	53	0.125	100.080	0.000	5.21	Pass
8918	MN,RT,I,S,CN1S,CN1SC,CN1SRC,2H,FM12S	Itron	I70S,CN1S,CN1SRC	12S	54,589	150	156	150	0.14	99.967	0.000	4.42	Pass
8920	MN,RT,D,MT14S,BW,CL,FM14S	Landys & Gyr	VMW65E	14S	516	35	40	35	0.328	100.232	0.000	5.58	Pass
8923	MN,RT,E,A3R,A3RL,A3T,A3TL,TE,FM16S	Elster	A3R (L), A3T (L)	16S	7,713	75	80	75	0.033	99.979	0.000	4.83	Pass
8926	MN,RT,W,A1R,A1R-AL,X8,FM36S	ABB Power	A1R, A1R-AL	36S	10	3	5	3	0.01	100.017	0.000	7.59	Pass
8927	MN,RT,E,W,A1R+,A1RL+,X8,FM36S	Elster	A1R+, A1RL+	36S	4,711	75	80	75	0.059	99.965	0.000	4.83	Pass
8928	MN,RT,E,A3R,A3R-A,A3RALNCQ,X8,FM36S	Elster	A3R (ALNCQ)	36S	1,151	35	40	35	0.04	99.985	0.000	5.58	Pass
8935	MN,RT,E,A1R-A,A1T+,Y1,FM16S	Elster	A1R-A, A1T+	16S	181	15	18	16	0.119	99.936	0.000	6.55	Pass
8936	MN,RT,E,A3R,A3RL,A3T,V0,FM12S	Elster	A3R (L), A3T	12S	21	4	6	5	0.044	100.018	0.000	10.88	Pass
8937	MN,RT,E,A3R,A3T,A3TL,A3RL,A3R-AL,A3R-A,RJ,FM4S	Elster	A3R (AL), A3T (L)	4S	889	35	40	36	0.045	100.002	0.000	5.58	Pass
8938	MN,RT,E,A3R-AL,A3R,A3R-A,ON,Y8,FM5/35S	Elster	A3R (AL)	5S	74	7	9	7	0.022	99.970	0.000	8.4	Pass
8939	MN,RT,E,A3T,A3TL,A3RL,N5,FM1S	Elster	A3T (L), A3RL	1S	137	10	12	10	0.02	100.002	0.000	7.26	Pass
8940	MN,RT,W,A1T+,A1R-A,V0,FM12S	ABB Power	A1T+, A1R-A	12S	27	5	7	5	0.091	100.004	0.000	9.8	Pass
8942	MN,RT,E,W,A1T+,N5,FM1S	Elster	A1T+,A1R-A	1S	9	3	5	5	0.079	99.928	0.000	7.59	Pass
8943	MN,RT,E,W,A1R-A,NY,FM2S	Elster	A1R-A	2S	4	3	4	3	0.05	99.903	0.000	7.59	Pass
8944	MN,RT,E,W,A1D+,TE,FM16S	Elster	A1D+	16S	278	15	18	16	0.238	99.924	0.000	6.55	Pass
8945	MN,RT,E,W,A1R+,KZ,FM9S	Elster	A1R+	9S	19,348	100	105	100	0.118	99.976	0.000	4.67	Pass
8946	MN,RT,E,W,A1T+,TE,FM16S	Elster	A1T+	16S	20,367	100	105	100	0.117	99.999	0.000	4.67	Pass
8947	MN,RT,E,W,A1D+,TX,FM12S	Elster	A1D+	12S	12,213	100	105	101	0.042	99.951	0.000	4.67	Pass
8948	MN,RT,E,W,A1T+,TX,FM12S	Elster	A1T+	12S	2,858	50	54	50	0.088	99.993	0.000	5.21	Pass
8949	MN,RT,W,A1R-A,A1R-AL,KZ,FM9S	ABB Power	A1R-A,A1R-AL	9S	26	5	7	5	0.072	100.008	0.000	9.8	Pass
8950	MN,RT,W,A1R,A1R-A,A1R-AL,BA,FM6S	ABB Power	A1R,A1R-A,A1R-AL	6S	17	4	6	5	0.036	99.988	0.000	10.88	Pass
8951	MN,RT,L&G,MS,AC	Landys & Gyr	MS	2S	94,675	150	156	151	0.267	99.987	0.000	4.42	Pass
8952	MN,RT,GE,I70S,AC	General Electric	I70S	2S	139,395	150	156	151	0.422	99.900	0.000	4.42	Pass
8953	MN,RT,S,S5S,QM,CL,BW,FM14S	Schlumberger	S5S	14S	100	10	12	10	0.319	100.447	0.000	7.26	Pass
8958	MN,RT,E,W,A3R,A3R-A,A3R-AL,A3R-ALNCQ,A3RALNCQ,A3CSPOLY,KZ,FM9S	Elster	A3R-(ALNCQ)	9S	8,839	75	80	76	0.069	99.983	0.000	4.83	Pass
8959	MN,RT,D,AL,ALF,RJ,FM4S	Landys & Gyr	AL (F)	4S	266	15	18	15	0.077	100.001	0.000	6.55	Pass
8960	MN,RT,E,A3R,A3R-A,A3R-AL,A3RL,A3T,A3TL,Y1,FM16S	Elster	A3R (AL), A3T (L)	16S	1,348	50	54	52	0.037	99.994	0.000	5.21	Pass
8961	MN,RT,E,A3T,A3TL,A3R,TX,FM12S	Elster	A3T (L), A3R	12S	563	35	40	35	0.037	99.970	0.000	5.58	Pass

Totals					1,488,843	3,740	4,030	3,808					
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**Xcel Energy - State of North Dakota
 Natural Gas Meter Testing
 Summary of 2018 Results**

Meter Test Group	Meters		Acceptable¹		Slow		Fast	
	#	#	#	%	#	%	#	%
Residential (capacity < 400 cubic ft/hr)	451	425	94.2%	4	0.9%	22	4.9%	
Small C&I (capacity 400 - 999 cubic ft/hr)	66	60	90.9%	6	9.1%	0	0.0%	
Large C&I (capacity > 999 cubic ft/hr)	152	136	89.5%	5	3.3%	11	7.2%	
Natural Gas Meter Totals	669	621	92.8%	15	2.2%	33	4.9%	

Note: Meters are tested at two flow rates. The accuracy is the average of the two tests.

¹ Meters that test within acceptable tolerance have an average error within plus or minus 2% of accurate