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To Foxtail Wind, LLC

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Foxtail Wind Energy Center  
Acoustic and Shadow Flicker Assessment Results  
Subject Dickey County, North Dakota

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From AECOM

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Date September 22, 2017

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Foxtail Wind, a wholly-owned, indirect subsidiary of NextEra Energy Resources, LLC (NEER) is proposing to develop the Foxtail Wind Energy Center (Project) in Dickey County, in southeastern North Dakota. The Project will be constructed and operated by Northern States Power Company (NSP), a subsidiary of Xcel Energy (Xcel). NEER and NSP/Xcel are collaborating on development of the Project to reflect the engineering and design inputs necessary to transfer ownership of the Project to NSP/Xcel at the end of 2017 according to the executed Purchase & Sale Agreement (PSA). NSP/Xcel currently proposes to construct the Project in two phases between 2018 and 2019. Both the NEER and NSP/Xcel teams will be involved in the engineering design of the Project to be constructed, although NSP/Xcel will ultimately construct the Project.

AECOM was contracted by Foxtail Wind to analyze predicted operational noise levels and shadow flicker hours/year at receptors identified for the proposed Project. Results are shown in the tables below for the site layout dated July 14, 2017. **Table 1** provides results of the acoustic assessment, and **Table 2** provides results of the shadow flicker assessment. There is no new information contained within these tables. The original data was contained in the PSC filings - Acoustics Assessment for the Foxtail Wind Energy Center, Dickey County, North Dakota, August 2017 and the Shadow Flicker Assessment for the Foxtail Wind Energy Center, Dickey County, North Dakota, August 2017.

Table 1

## Foxtail Wind Energy Center

Receiver ID	Occupation Status	Receptor Located on Participating Land?	Nearest WTG ID	Distance to Nearest WTG (m)	Modeled Receiver Coordinates (UTM Zone 14, NAD 83)		Cut-In	Predicted Operation Noise Levels (Leq, dBA) Per Scenario				
					Easting (m)	Northing (m)		No Alternates		With Alternates		
							Maximum Rotational	CMET Anomalous	Cut-In	Maximum Rotational	CMET Anomalous	
R04	Occupied	No	4	1198	504717.7	5110063.6	30.5	41.6	43.2	30.5	41.6	43.2
R05	Occupied	No	4	2353	503233.5	5109794.4	24.4	34.6	35.5	24.4	34.6	35.5
R07	Occupied	Yes	10	415	506665.7	5109352.1	40.9	52.9	55.7	40.9	52.9	55.7
R09	Occupied	No	20	1140	506262.4	5105925.4	32.5	43.5	45.2	32.5	43.6	45.2
R14	Occupied	No	38	2142	513814.5	5109359.4	20.8	32.7	33.6	21.1	32.9	33.8
R16	Occupied	No	59	2832	506810.5	5102390.2	23.7	33.6	34.3	23.7	33.6	34.3
R18	Occupied	No	68	2059	507342.8	5100282.6	24.9	35.3	36.2	24.9	35.3	36.2
R20	Occupied	No	69	1051	508485.3	5099326.5	32.0	43.2	45.1	32.0	43.2	45.1
R21	Occupied	No	74	2328	507781.6	5096670.6	22.0	32.2	33.0	22.0	32.2	33.0
R22	Occupied	Yes	75	1925	511103.7	5096921.4	19.5	29.8	30.8	19.5	29.8	30.8
R25	Occupied	No	67	1812	513250.1	5100181.3	26.3	36.7	37.8	26.3	36.7	37.8
R26	Occupied	No	63	785	512552.8	5101399.5	30.6	42.1	44.6	30.6	42.1	44.6
R28	Occupied	No	63	2252	513886.4	5102327.3	24.2	34.3	35.2	24.3	34.4	35.3
R32	Occupied	Yes	51	413	509570.5	5104838.3	39.1	51.0	53.7	39.2	51.1	53.8
R34	Occupied	No	38	3651	514856.4	5110460.9	13.8	26.0	26.6	13.8	26.0	26.6
R39	Occupied	No	6	1137	506420.7	5110789.2	31.5	42.5	44.1	31.5	42.5	44.1
R45	Occupied	No	38	3318	515480.6	5108010.1	18.8	30.0	30.6	18.8	30.0	30.6
R47	Occupied	No	63	3185	514719.7	5100307.6	19.9	29.8	30.4	19.9	29.8	30.4
R48	Occupied	No	73	3106	512740.0	5096870.9	20.9	30.8	31.5	20.9	30.8	31.5
R50	Occupied	No	20	3294	505944.2	5103638.2	22.2	32.0	32.6	22.2	32.0	32.6
R51	Occupied	No	3	2174	503289.2	5108223.5	26.0	36.4	37.3	26.0	36.4	37.3
R53	Occupied	No	68	1906	507480.5	5100151.8	26.6	37.1	38.1	26.6	37.1	38.1
R23	Possibly Occupied	No	73	2231	512328.6	5097789.4	24.4	34.7	35.6	24.4	34.7	35.6
R29	Possibly Occupied	Yes	57	1373	513646.8	5103418.3	26.1	36.9	38.3	26.2	36.9	38.3

Table 1

## Foxtail Wind Energy Center

Receiver ID	Occupation Status	Receptor Located on Participating Land?	Nearest WTG ID	Distance to Nearest WTG (m)	Modeled Receiver Coordinates (UTM Zone 14, NAD 83)		Cut-In	Predicted Operation Noise Levels (Leq, dBA) Per Scenario				
					Easting (m)	Northing (m)		No Alternates		With Alternates		
							Maximum Rotational	CMET Anomalous	Cut-In	Maximum Rotational	CMET Anomalous	
R01	Not occupied	No	12	688	507697.7	5110344.3	35.2	46.8	49.3	35.2	46.8	49.3
R02	Not occupied	No	13	2234	508912.5	5111767.4	25.4	35.8	36.6	25.4	35.8	36.6
R03	Not occupied	No	6	394	506010.0	5109981.6	38.1	50.1	52.9	38.1	50.1	52.9
R08	Not occupied	No	1	482	505968.0	5107901.4	39.9	51.8	54.6	39.9	51.8	54.6
R10	Not occupied	No	1	2236	503408.5	5107052.9	25.6	35.8	36.7	25.6	35.8	36.7
R11	Not occupied	Yes	25	102	507418.8	5107433.3	47.2	59.7	62.7	47.2	59.7	62.7
R12	Not occupied	Yes	27	1067	507669.1	5105894.4	33.5	44.5	46.0	33.6	44.6	46.1
R13	Not occupied	Yes	19	373	511094.7	5108819.4	37.0	49.2	51.8	37.0	49.2	51.8
R15	Not occupied	No	38	863	513010.8	5107838.3	31.2	43.2	45.3	31.4	43.3	45.4
R17	Not occupied	Yes	59	2018	507812.6	5102648.2	26.3	36.7	37.6	26.4	36.7	37.7
R19	Not occupied	No	68	1020	508392.8	5100230.1	31.7	42.8	44.6	31.7	42.8	44.6
R24	Not occupied	No	73	1315	511472.3	5098151.1	24.9	36.1	37.6	24.9	36.1	37.6
R27	Not occupied	No	62	384	510923.7	5101884.5	38.9	50.9	53.7	38.9	50.9	53.7
R30	Not occupied	Yes	53	477	510765.4	5104220.7	38.5	50.4	53.2	38.8	50.6	53.3
R31	Not occupied	No	45	368	509172.5	5105641.4	38.6	50.5	53.2	38.8	50.7	53.3
R33	Not occupied	Yes	47	243	510490.7	5105095.1	42.3	54.6	57.4	42.9	55.1	58.0
R35	Not occupied	No	24	1121	506744.0	5105637.2	31.3	42.1	43.5	31.3	42.1	43.5
R36	Not occupied	No	63	2238	513971.4	5101082.2	24.0	34.0	34.9	24.0	34.0	34.9
R38	Not occupied	No	4	1202	504511.0	5109840.9	30.5	41.4	43.0	30.5	41.4	43.0
R40	Not occupied	No	73	2760	512365.2	5096975.8	22.2	32.2	32.9	22.2	32.2	32.9
R41	Not occupied	Yes	75	1313	510484.5	5097230.6	28.0	39.0	40.6	28.0	39.0	40.6
R42	Not occupied	Yes	57	1444	513953.6	5105695.0	25.3	36.3	37.7	25.5	36.4	37.8
R43	Not occupied	Yes	19	2773	511566.8	5111384.1	20.2	31.3	32.1	20.2	31.4	32.1
R46	Not occupied	No	57	3171	516052.0	5103810.2	16.0	25.8	26.5	16.0	25.8	26.5
R49	Not occupied	Yes	18	436	510752.1	5108630.0	37.5	49.6	52.2	37.5	49.6	52.3
R52	Not occupied	Yes	63	437	512011.0	5101161.6	35.4	47.6	50.5	35.4	47.6	50.5

Table 2

**Scenario A and B Shadow Flicker Results**

WindFarm ID	Receptor ID	Receptor Status		Nearest Turbine ID	Distance to Nearest Turbine (m)	Modeled Receiver Coordinates (UTM Zone 14, NAD 83)		Total Adjusted Hours per Year
		Occupation Status	Receptor Located on Participating Land?			Easting (m)	Northing (m)	
H4	R04	Occupied	No	4	1,198	504718	5110064	9.0
H5	R05	Occupied	No	4	2,353	503234	5109794	0.0
H6	R07	Occupied	Yes	10	415	506666	5109352	98.0
H8	R09	Occupied	No	20	1,140	506262	5105925	0.0
H13	R14	Occupied	No	38	2,142	513814	5109359	0.0
H15	R16	Occupied	No	59	2,832	506811	5102390	0.0
H17	R18	Occupied	No	68	2,059	507343	5100283	0.0
H19	R20	Occupied	No	69	1,051	508485	5099326	7.3
H20	R21	Occupied	No	74	2,328	507782	5096671	0.0
H21	R22	Occupied	Yes	75	1,925	511104	5096921	0.0
H24	R25	Occupied	No	67	1,812	513250	5100181	0.0
H25	R26	Occupied	No	63	785	512553	5101399	10.8
H27	R28	Occupied	No	63	2,252	513886	5102327	0.0
H31	R32	Occupied	Yes	51	413	509571	5104838	19.5
H33	R34	Occupied	No	38	3,651	514856	5110461	0.0
H37	R39	Occupied	No	6	1,137	506421	5110789	0.0
H42	R45	Occupied	No	38	3,318	515481	5108010	0.0
H44	R47	Occupied	No	63	3,185	514720	5100308	0.0
H45	R48	Occupied	No	73	3,106	512740	5096871	0.0
H47	R50	Occupied	No	20	3,294	505944	5103638	0.0
H48	R51	Occupied	No	3	2,174	503289	5108224	0.0
H50	R53	Occupied	No	68	1,906	507481	5100152	0.0
H22	R23	Possibly Occupied	No	73	2,231	512329	5097789	0.0
H28	R29	Possibly Occupied	Yes	57	1,373	513647	5103418	0.0

Table 2

**Scenario A and B Shadow Flicker Results**

WindFarm ID	Receptor ID	Receptor Status		Nearest Turbine ID	Distance to Nearest Turbine (m)	Modeled Receiver Coordinates (UTM Zone 14, NAD 83)		Total Adjusted Hours per Year
		Occupation Status	Receptor Located on Participating Land?			Easting (m)	Northing (m)	
H1	R01	Not occupied	No	12	688	507698	5110344	5.7
H2	R02	Not occupied	No	13	2,234	508912	5111767	0.0
H3	R03	Not occupied	No	6	394	506010	5109982	57.5
H7	R08	Not occupied	No	1	482	505968	5107901	108.5
H9	R10	Not occupied	No	1	2,236	503409	5107053	0.0
H10	R11	Not occupied	Yes	25	102	507419	5107433	430.0
H11	R12	Not occupied	Yes	27	1,067	507669	5105894	0.0
H12	R13	Not occupied	Yes	19	373	511095	5108819	61.7
H14	R15	Not occupied	No	38	863	513011	5107838	23.7
H16	R17	Not occupied	Yes	59	2,018	507813	5102648	0.0
H18	R19	Not occupied	No	68	1,020	508393	5100230	11.1
H23	R24	Not occupied	No	73	1,315	511472	5098151	0.0
H26	R27	Not occupied	No	62	384	510924	5101885	43.5
H29	R30	Not occupied	Yes	53	477	510765	5104221	37.0
H30	R31	Not occupied	No	45	368	509172	5105641	66.1
H32	R33	Not occupied	Yes	47	243	510491	5105095	41.7
H34	R35	Not occupied	No	24	1,121	506744	5105637	0.0
H35	R36	Not occupied	No	63	2,238	513971	5101082	0.0
H36	R38	Not occupied	No	4	1,202	504511	5109841	10.3
H38	R40	Not occupied	No	73	2,760	512365	5096976	0.0
H39	R41	Not occupied	Yes	75	1,313	510484	5097231	0.0
H40	R42	Not occupied	Yes	57	1,444	513954	5105695	0.0
H41	R43	Not occupied	Yes	19	2,773	511567	5111384	0.0
H43	R46	Not occupied	No	57	3,171	516052	5103810	0.0
H46	R49	Not occupied	Yes	18	436	510752	5108630	52.1
H49	R52	Not occupied	Yes	63	437	512011	5101162	7.8