

Late Filed Exhibit 36
Updated Shadow Flicker Analysis
and
Updated Acoustic Analysis



TO: NextEra Energy Resources, LLC

FROM: Tetra Tech, Inc.

DATE: June 14, 2016

SUBJECT: Oliver III Wind Energy Center – Shadow Flicker Analysis Predictions

Tetra Tech, Inc. was contracted by Oliver III Wind, LLC, a wholly-owned, indirect subsidiary of NextEra Energy Resources, LLC (NextEra), to analyze predicted shadow flicker hours/year at receptors from the proposed Oliver III Wind Energy Center. **Table 1** shows shadow flicker impact predictions for occupied receptors based on the February 4, 2016 Oliver III turbine array. The table also identifies participation status of receptor, distance to nearest turbine, turbine number, and main turbines impacting receptor.

Based on the Application for a Certificate of Site Compatibility submitted to the Public Service Commission (PSC) in February 2016, NextEra submitted the shadow flicker analysis showing 65 receptors. Due to the condensed Project boundary, at the PSCs request, the shadow flicker report was revised for the 30-day April 2016 submittal to show a total of 64 receptors.

Table 1. Oliver III Wind Energy Center Shadow Flicker Modeling Results

Receptor ID	Landowner Name	Occupancy Status	Participating Status	WindPro Predicted Expected Shadow Flicker - Alternates (Hours per Year)	WindPro Predicted Expected Shadow Flicker - Primary Turbines Only (Hours per Year)	Distance to Nearest Turbine (m)	Nearest Turbine Number (2-4-16 Array)	Turbines Affecting Shadow Flicker at Receptor (2-4-16 Array)
810021	Hinnergardt, Kirk & Tammy	Occupied	Participating	56:34:00	56:34:00	460.0	40	46,40,41,45
7002	VOGELWALTER & LORRAINE M	Occupied	Participating	32:43:00	11:40:00	607.3	6	Alt3,6
6005	OLSON CHAD & JANEL	Occupied	Not Participating	24:11:00	24:11:00	1,006.3	23	22,15,21,16,13,14
6006	HAGEROTT/ARDEN	Occupied	Participating	18:34:00	18:34:00	917.7	23	22,15,21,16,14
6004	ZANDER THOMAS F JR & NANCY	Occupied	Not Participating	16:26:00	16:26:00	715.8	37	37,36,24,35
6011	GERHARDT/LANCE L & TINA M	Occupied	Participating	7:12:00	7:12:00	849.0	7	7
6008	SPENCER/AUDREY I	Occupied	Participating	6:31:00	6:31:00	1,178.5	17	16,14
7016	BERGER/FRANCES J	Occupied	Not Participating	5:49:00	5:49:00	1,360.9	28	29,27,28
7007	KOPP BENNETT C & DELLA K	Occupied	Not Participating	3:49:00	3:49:00	767.2	17	16
7029	BAHM/CALISTA A	Occupied	Not Participating	3:34:00	3:34:00	1,667.0	1	1
6013	ENGELHARDT/BRUCE	Occupied	Not Participating	2:56:00	0:02:00	1,329.4	Alt1	Alt1,3
107	HOGER/DANIEL W	Occupied	Not Participating	0:00:00	0:00:00	4,087.2	43	NA
111	HATZENBUHLER/JOHN R/FAMILY TRUST	Occupied	Not Participating*	0:00:00	0:00:00	3,568.9	18	NA
113	BOEHM/JAMES	Occupied	Participating	0:00:00	0:00:00	2,691.7	18	NA
130	SCHLOSSER/NATHAN & MELANIE	Occupied	Not Participating	0:00:00	0:00:00	3,655.9	Alt3	NA
131	TERNES/RICHARD D & KIMBERLY S	Occupied	Not Participating	0:00:00	0:00:00	3,856.3	Alt3	NA
134	TERNES/RICHARD D & KIMBERLY S	Occupied	Not Participating	0:00:00	0:00:00	3,911.8	Alt3	NA
138	TERNES/BRAD S & RENAE C	Occupied	Not Participating	0:00:00	0:00:00	3,986.3	Alt3	NA

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Receptor ID	Landowner Name	Occupancy Status	Participating Status	WindPro Predicted Expected Shadow Flicker - with Alternates (Hours per Year)	WindPro Predicted Expected Shadow Flicker - Primary Turbines Only (Hours per Year)	Distance to Nearest Turbine (m)	Nearest Turbine Number (2-4-16 Array)	Turbines Affecting Shadow Flicker at Receptor (2-4-16 Array)
172	LENNIE/ALLYN R	Occupied	Not Participating	0:00:00	0:00:00	2,931.2	48	NA
175	Dr. Dale & Gail Hilton	Occupied	Not Participating	0:00:00	0:00:00	4,752.5	30	NA
5013	Doll, Douglas Etal	Occupied	Not Participating	0:00:00	0:00:00	4,984.8	42	NA
5015	BARNHARDT, DALE	Occupied	Not Participating	0:00:00	0:00:00	4,698.5	30	NA
5016	HAGEROTT, DELMAR HILTON, DALE AND GAIL	Occupied	Not Participating	0:00:00	0:00:00	4,526.4	30	NA
5017		Occupied	Not Participating	0:00:00	0:00:00	5,046.7	30	NA
5018	HAGEROTT, DELMAR	Occupied	Not Participating	0:00:00	0:00:00	4,390.6	30	NA
5020	KRIEDEMANN, RICK	Occupied	Not Participating	0:00:00	0:00:00	2,606.4	30	NA
5021	KRIEDEMANN, RICK	Occupied	Not Participating	0:00:00	0:00:00	2,608.2	30	NA
5026	Mark & Lynette Dagley	Occupied	Not Participating	0:00:00	0:00:00	2,505.1	42	NA
6010	Zander Marcus and Mary L.	Occupied	Participating	0:00:00	0:00:00	1,190.8	10	NA
7010	KOPP/LEE	Occupied	Not Participating	0:00:00	0:00:00	1,691.1	17	NA
7020	SCHLOSSER/RONALD J	Occupied	Not Participating	0:00:00	0:00:00	2,160.2	Alt3	NA
7023	BAHM/CALISTA A	Occupied	Not Participating	0:00:00	0:00:00	1,910.9	1	NA
7027	BAHM/CALISTA A	Occupied	Not Participating	0:00:00	0:00:00	1,858.6	1	NA
500009	Kautzman FT	Occupied	Participating	0:00:00	0:00:00	1,859.1	30	NA
500015	KRAFT, KASPER	Occupied	Not Participating	0:00:00	0:00:00	2,954.4	47	NA
500034	ORGAARD, MIKE	Occupied	Not Participating	0:00:00	0:00:00	4,497.8	30	NA
500038	ORGAARD, TODD & REBECCA	Occupied	Not Participating	0:00:00	0:00:00	6,105.3	30	NA
500042	SCHWALBE, ALAN	Occupied	Not Participating	0:00:00	0:00:00	5,466.2	30	NA
500046	SCHWALBE, ALAN	Occupied	Not Participating	0:00:00	0:00:00	5,435.5	30	NA
500048	HAGEROTT, ALVIN	Occupied	Not Participating*	0:00:00	0:00:00	3,938.6	30	NA
810006	SCHMIDT, CALVIN & JACKIE	Occupied	Not Participating	0:00:00	0:00:00	4,423.2	30	NA

Table 1. Oliver III Wind Energy Center Shadow Flicker Modeling Results

Receptor ID	Landowner Name	Occupancy Status	Participating Status	WindPro Predicted Expected Shadow Flicker - with Alternates (Hours per Year)	WindPro Predicted Expected Shadow Flicker - Primary Turbines Only (Hours per Year)	Distance to Nearest Turbine (m)	Nearest Turbine Number (2-4-16 Array)	Turbines Affecting Shadow Flicker at Receptor (2-4-16 Array)
810013	HAGEROTT, ALVIN	Occupied	Participating	0:00:00	0:00:00	3,250.5	30	NA
810036	HOFFERT/KEITH & STACIE	Occupied	Not Participating	0:00:00	0:00:00	3,130.8	1	NA
810040	HAIDER/RICHARD J	Occupied	Not Participating	0:00:00	0:00:00	2,499.5	1	NA
810043	FROHLICH/DOROTHY A	Occupied	Not Participating	0:00:00	0:00:00	1,763.4	Alt1	NA
810044	FROHLICH/DOROTHY A	Occupied	Not Participating	0:00:00	0:00:00	1,757.4	Alt1	NA
810048	CHURCH OF ST VINCENT	Occupied	Not Participating	0:00:00	0:00:00	1,973.9	Alt1	NA
810051	BAUER/THOMAS & LUCY	Occupied	Not Participating	0:00:00	0:00:00	2,703.2	Alt1	NA
810054	SCHLOSSER/PERRY A	Occupied	Not Participating	0:00:00	0:00:00	2,932.5	Alt1	NA
810058	FROHLICH/C & T/FAMILY PARTNERSHIP	Occupied	Not Participating	0:00:00	0:00:00	1,168.7	Alt1	NA
810063	BAUER/JAMES L & IDA	Occupied	Not Participating	0:00:00	0:00:00	2,125.0	Alt1	NA
810068	BAUER/DANIEL R & KATHLEEN	Occupied	Not Participating	0:00:00	0:00:00	2,335.6	Alt1	NA
810070	BAUER/DANIEL R & KATHLEEN	Occupied	Not Participating	0:00:00	0:00:00	2,375.0	Alt1	NA
810074	BAUER/DANIEL R & KATHLEEN	Occupied	Not Participating	0:00:00	0:00:00	2,387.6	Alt1	NA
810079	BERGER/FRED J & ARLENE M	Occupied	Not Participating	0:00:00	0:00:00	2,756.9	Alt1	NA
810083	KROFT/DALEN G & ISABELLE M	Occupied	Not Participating	0:00:00	0:00:00	3,076.8	Alt1	NA
810087	KROFT/DALEN G & ISABELLE M	Occupied	Not Participating	0:00:00	0:00:00	2,787.8	Alt1	NA
810094	FROHLICH/VERONICA A	Occupied	Not Participating	0:00:00	0:00:00	2,535.4	Alt1	NA
810101	BOEHM/JAMES	Occupied	Not Participating*	0:00:00	0:00:00	1,985.2	18	NA

Table 1. Oliver III Wind Energy Center Shadow Flicker Modeling Results

Receptor ID	Landowner Name	Occupancy Status	Participating Status	WindPro Predicted Expected Shadow Flicker - with Alternates (Hours per Year)	WindPro Predicted Expected Shadow Flicker - Primary Turbines Only (Hours per Year)	Distance to Nearest Turbine (m)	Nearest Turbine Number (2-4-16 Array)	Turbines Affecting Shadow Flicker at Receptor (2-4-16 Array)
810102	BOEHM/JAMES	Occupied	Not Participating*	0:00:00	0:00:00	2,014.9	18	NA
810109	BOEHM/ANDREW & WENDY	Occupied	Not Participating	0:00:00	0:00:00	1,950.0	18	NA
810116	FRANCK/NORMAN P & SHARON B	Occupied	Not Participating	0:00:00	0:00:00	2,680.9	Alt1	NA
810118	JUST/JERRY L & CARLENE	Occupied	Not Participating	0:00:00	0:00:00	3,684.4	43	NA
810242	HAGEROTT/DONALD H. & RUTH	Occupied	Not Participating	0:00:00	0:00:00	1,125.1	1	NA

*Participating elsewhere in the project area



TO: NextEra Energy Resources, LLC

FROM: Tetra Tech, Inc.

DATE: June 14, 2016

SUBJECT: Oliver III Wind Energy Center – Acoustic Analysis Predictions

Tetra Tech, Inc. was contracted by Oliver Wind III, LLC, a wholly-owned, indirect subsidiary of NextEra Energy Resources, LLC (NextEra), to analyze predicted noise impacts at occupied receptors from the proposed Oliver III Wind Energy Center. **Table 1** shows noise impact predictions for the February 4, 2016 Oliver III Wind Energy Center turbine array on receptors. The table also identifies participation status of receptor, distance to nearest turbine, turbine number, and main turbines impacting receptor.

Based on the Application for a Certificate of Site Compatibility submitted to the Public Service Commission (PSC) in February 2016, NextEra submitted the acoustic analysis showing 65 receptors. Due to the condensed Project boundary, at the PSCs request, the acoustic report was revised for the 30-day April 2016 submittal to show a total of 64 receptors.

Table 1. Oliver III Wind Energy Center Acoustic Modeling Results

Receptor ID	Landowner Name	Occupancy Status	Participating Status	Acoustic Modeling Results – Not Participating Alternates			Acoustic Modeling Results – With Alternates			Distance to Nearest Wind Turbine (m)	Nearest Turbine Number (2-4-16 Array)	Main Turbines Impacting Acoustic Modeling at Receptor (2-4-16 Array)
				Maximum Rotation (dBA)	Maximum Rotation under Anomalous (dBA)	Cut-in Rotation (dBA)	Maximum Rotation (dBA)	Maximum Rotation under Anomalous (dBA)	Cut-in Rotation (dBA)			
				15	27	30	15	27	30			
107	HOGER/DANIEL W	Occupied	Not Participating	15	27	30	15	27	30	4,087	43	18, 19, 20, 43, 31
111	HATZENBUHLER/JOHN R/FAMILY TRUST	Occupied	Not Participating*	18	31	33	18	31	33	3,569	18	18, 19, 20, 33, 34
113	BOEHM/JAMES	Occupied	Participating	22	34	36	22	34	36	2,692	18	18, 19, 20, 31, 10
130	SCHLOSSER/NATHAN & MELANIE	Occupied	Not Participating	18	29	32	18	30	33	3,656	All3	All3, 2, 6, 5, 1
131	TERNES/RICHARD D & KIMBERLY S	Occupied	Not Participating	17	29	31	17	30	32	3,856	All3	All3, 2, 6, 5, 17
134	TERNES/RICHARD D & KIMBERLY S	Occupied	Not Participating	18	30	32	18	30	33	3,912	All3	All3, 6, 2, 5, 17
138	TERNES/BRAD S & RENAE C	Occupied	Not Participating	18	30	32	18	30	33	3,986	All3	All3, 2, 6, 5, 1
172	LENNIE/ALLYN R	Occupied	Not Participating	18	30	33	18	30	33	2,931	48	48, 43, 44, 45, 46
175	Dr. Dale & Gail Hilton	Occupied	Not Participating	10	21	23	10	21	23	4,752	30	30, 29, 28, 27
5013	Doll, Douglas Etal	Occupied	Not Participating	16	27	30	16	27	30	4,985	42	42, 47, 41, 40, 46
5015	BARNHARDT, DALE	Occupied	Not Participating	11	22	24	11	22	24	4,689	30	30, 29, 28, 42, 27
5016	HAGEROTT, DELMAR	Occupied	Not Participating	15	26	28	15	26	28	4,526	30	30, 29, 28, 27, 42
5017	HILTON, DALE AND GAIL	Occupied	Not Participating	10	21	23	10	21	23	5,047	30	30, 29, 28, 42, 27
5018	HAGEROTT, DELMAR	Occupied	Not Participating	16	27	29	16	27	29	4,391	30	30, 29, 28, 42, 41
5020	KRIEDEMAN, RICK	Occupied	Not Participating	24	35	37	24	35	37	2,606	30	30, 42, 37, 29, 41
5021	KRIEDEMAN, RICK	Occupied	Not Participating	24	35	37	24	35	37	2,608	30	30, 42, 29, 37, 41
5026	Mark & Lynette Dagley	Occupied	Not Participating	19	31	33	19	31	33	2,505	42	42, 47, 41, 48, 37
6004	ZANDER THOMAS F JR & NANCY	Occupied	Not Participating	33	45	46	33	45	46	716	37	37, 36, 24, 23, 22
6005	OLSON CHAD & JANEL	Occupied	Not Participating	32	45	46	33	45	46	1,006	23	23, 22, 15, 21
6006	HAGEROTT/ARDEN	Occupied	Participating	33	45	47	33	45	47	918	23	23, 22, 24, 25, 15
6008	SPENCER/AUDREY I	Occupied	Participating	28	40	42	28	41	42	1,178	17	All3, 9, 14, 17, 6
6010	Zander Marcus and Mary L.	Occupied	Participating	26	39	40	27	39	41	1,191	10	10, 11, 7, 12, 8
6011	GERHARDT/LANCE L & TINA M	Occupied	Participating	30	43	44	30	43	44	849	7	7, 10, 8, 11, 3
6013	ENGELHARDT/BRUCE	Occupied	Not Participating	22	35	37	24	37	39	1,329	All1	All1, 3, 4, All2, 7
7002	VOGEL/WALTER & LORRAINE M	Occupied	Participating	30	43	43	32	44	45	607	6	6, All3, 5, All2
7007	KOPP BENNETT C & DELLA K	Occupied	Not Participating	30	42	43	30	42	43	767	17	17, 16, 15
7010	KOPP/LEE	Occupied	Not Participating	28	38	40	28	38	40	1,691	17	17, 28, 27, 29, 16
7016	BERGER/FRANCES J	Occupied	Not Participating	30	39	41	30	40	41	1,361	28	28, 29, 27, 17, 30
7020	SCHLOSSER/RONALD J	Occupied	Not Participating	21	33	36	22	35	37	2,160	All3	All3, 6, 2, 5

Table 1. Oliver III Wind Energy Center Acoustic Modeling Results

Receptor ID	Landowner Name	Occupancy Status	Participating Status	Acoustic Modeling Results – Not Participating Alternates				Acoustic Modeling Results – With Alternates				Distance to Nearest Wind Turbine (m)	Nearest Turbine Number (2-4-16 Array)	Main Turbines Impacting Acoustic Modeling at Receptor (2-4-16 Array)
				Cut-in Rotation (dBA)	Maximum Rotation (dBA)	Maximum Rotation under Anomalous (dBA)	Maximum Rotation (dBA)	Cut-in Rotation (dBA)	Maximum Rotation (dBA)	Maximum Rotation under Anomalous (dBA)				
7023	BAHM/CALISTA A	Occupied	Not Participating	20	33	35	21	33	35	1,911	1	1, 2		
7027	BAHM/CALISTA A	Occupied	Not Participating	20	33	35	21	34	36	1,859	1	1, 2, 5, AII2		
7029	BAHM/CALISTA A	Occupied	Not Participating	21	34	35	22	34	36	1,667	1	1, 2, 5, AII2		
500009	Kautzman FT	Occupied	Participating	23	32	34	23	32	34	1,859	30	30, 29, 28, 27		
500015	KRAFT, KASPER	Occupied	Not Participating	19	31	34	19	31	34	2,954	47	47, 42, 41, 40		
500034	ORGAARD, MIKE	Occupied	Not Participating	15	25	28	15	25	28	4,498	30	30, 29, 28, 27, 26		
500038	ORGAARD, TODD & REBECCA	Occupied	Not Participating	6	17	19	6	17	19	6,105	30	30, 29, 28, 27, 26		
500042	SCHWALBE, ALAN	Occupied	Not Participating	9	20	22	9	20	22	5,466	30	30, 29, 28, 42, 27		
500046	SCHWALBE, ALAN	Occupied	Not Participating	9	20	22	9	20	22	5,436	30	30, 29, 28, 42, 27		
500048	HAGEROTT, ALVIN	Occupied	Not Participating*	12	23	26	12	23	26	3,939	30	30, 29, 28, 27, 42		
810006	SCHMIDT, CALVIN & JACKIE	Occupied	Not Participating	14	24	27	14	24	27	4,423	30	17, 25, 30, 16, 15		
810013	HAGEROTT, ALVIN	Occupied	Participating	19	30	32	19	30	32	3,250	30	30, 29, 28, 27, 42		
810021	Hinnergardt, Kirk & Tammy	Occupied	Participating	38	51	51	38	51	51	460	40	40, 46, 41		
810036	HOFFERT/KEITH & STACIE	Occupied	Not Participating	12	25	27	13	26	28	3,131	1	2, 1, AII1, AII2, 5		
810040	HAIDER/RICHARD J	Occupied	Not Participating	18	30	33	19	31	34	2,499	1	1, 2, AII2, 5, 4		
810043	FROHLICH/DOROTHY A	Occupied	Not Participating	16	29	31	20	32	34	1,763	AII1	AII1, 3, 4, AII2, 1		
810044	FROHLICH/DOROTHY A	Occupied	Not Participating	19	31	33	21	34	36	1,757	AII1	AII1, 3, 4, AII2, 1		
810048	CHURCH OF ST VINCENT	Occupied	Not Participating	19	32	34	21	34	36	1,974	AII1	AII1, 3, 4, AII2, 1		
810051	BAUER/THOMAS & LUCY	Occupied	Not Participating	17	30	32	19	31	33	2,703	AII1	AII1, 3, 4, AII2, 1		
810054	SCHLOSSER/PERRY A	Occupied	Not Participating	13	26	29	16	28	31	2,932	AII1	AII1, 3, 4		
810058	FROHLICH & T/FAMILY PARTNERSHIP	Occupied	Not Participating	19	31	33	24	36	37	1,169	AII1	AII1, 3, 4		
810063	BAUER/JAMES L & IDA	Occupied	Not Participating	18	31	33	20	33	35	2,125	AII1	AII1, 3, 4		
810068	BAUER/DANIEL R & KATHLEEN	Occupied	Not Participating	18	30	33	19	32	34	2,336	AII1	AII1, 3, 4		
810070	BAUER/DANIEL R & KATHLEEN	Occupied	Not Participating	18	29	32	19	31	33	2,375	AII1	AII1, 3		
810074	BAUER/DANIEL R & KATHLEEN	Occupied	Not Participating	17	29	32	19	31	33	2,388	AII1	AII1, 3, 4		
810079	BERGER/FRED J & ARLENE M	Occupied	Not Participating	16	29	31	18	30	32	2,757	AII1	AII1, 3, 4, 7		
810083	KROFT/DALEN G & ISABELLE M	Occupied	Not Participating	16	29	31	17	30	32	3,077	AII1	AII1, 3, 4, 7		

Table 1. Oliver III Wind Energy Center Acoustic Modeling Results

Receptor ID	Landowner Name	Occupancy Status	Participating Status	Acoustic Modeling Results – Not Participating Alternates				Acoustic Modeling Results – With Alternates			Distance to Nearest Wind Turbine (m)	Nearest Turbine Number (2-4-16 Array)	Main Turbines Impacting Acoustic Modeling at Receptor (2-4-16 Array)
				Cut-in Rotation (dBA)	Maximum Rotation (dBA)	Maximum Rotation under Anomalous (dBA)	Maximum Rotation (dBA)	Cut-in Rotation (dBA)	Maximum Rotation (dBA)	Maximum Rotation under Anomalous (dBA)			
810087	KROFT/DALEN G & ISABELLE M	Occupied	Not Participating	18	31	33	19	32	34	2,788	Alt1	Alt1, 3, 4	
810094	FROHLICH/VERONICA A	Occupied	Not Participating	19	32	34	20	33	35	2,535	Alt1	Alt1, 3, 7, 4, 10	
810101	BOEHM/JAMES	Occupied	Not Participating*	24	36	39	24	36	39	1,985	18	18, 19	
810102	BOEHM/JAMES	Occupied	Not Participating*	23	36	38	23	36	38	2,015	18	18, 19	
810109	BOEHM/ANDREW & WENDY	Occupied	Not Participating	24	37	39	24	37	39	1,950	18	18, 19, 31, 20, 32	
810116	FRANCK/NORMAN P & SHARON B	Occupied	Not Participating	18	30	33	19	31	34	2,681	Alt1	Alt1, 3, 4, 7	
810118	JUST/JERRY L & CARLENE	Occupied	Not Participating	14	27	29	14	27	29	3,684	43	43, 44, 48, 31	
810242	HAGEROTT/DONALD H. & RUTH	Occupied	Not Participating	25	38	39	26	38	39	1,125	1	1, 2	

*Participating elsewhere in the project area