Tree Clearing Plan, 2010

09-1066-EL-BGN

Blattner Energy, Inc

Tree Clearing Plan

Blue Creek Wind Farm

Prepared by

Blattner Energy, Inc 392 County Road 50 Avon, Minnesota 56310 JII SEP 27 PH 4:

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1. Introduction

Approximately 1,298 acres will be disturbed for the installation of gravel access roads, underground collection, overhead collection, crane walks, turbine sites, substation pads, laydown yard, and the O&M building. According to the Blue Creek Wetland Delineation Report, the project area consists of more than 90 percent row croplands with a network of drainage ditches and so the amount of tree clearing necessary will be minimal. Initial inspections of wetlands and waterbodies delineated for Blue Creek showed that at least nine locations may have small areas of tree cleared.

The Indiana bat (*Myotis sodalis*) is an endangered species of bat that roosts within dead trees with sloughing bark or cavities. During the environmental review for the project, the U.S. Fish and Wildlife Service and the Ohio Department of Natural Resources determined that the proposed project did not have enough suitable habitat to support summer populations of Indiana bats, and neither agency recommended that surveys should be conducted for Indiana bats. However; the Ohio Power Siting Board has requested that Heartland Wind conduct tree clearing during the winter months when Indiana bats will be hibernating in caves.

Blattner Energy identified nine areas as potentially having small amounts of tree potentially cleared for construction activities. At the request of Heartland Wind, Rhett Good of WEST, Inc. evaluated nine areas for potential roost trees (Attachment I).

1.a. Purpose

Vegetative growth size and quantity, soil conditions and bearing capacity, topography, rainfall and climate as well as the project specifications must all be considered when determining the methods that will be used for land clearing. The purpose of the Tree Clearing Procedure is to establish protocol for clearing and grubbing for the construction of the Blue Creek Wind Farm where tree clearing cannot be avoided. Work will be done so as to minimize removal of woody vegetation. Priority will be given to protecting potential roost trees throughout the project area, and all woody vegetation in wetlands and riparian areas.

1.b. Responsible Personnel

Site Manager, Blattner Energy	320-248-5223
Civil Superintendent, Blattner Energy	320-241-7035
Environmental Specialist (Monitor)	513-520-7120
Environmental Specialist (Monitor)	937-308-2951
	Civil Superintendent, Blattner Energy Environmental Specialist (Monitor)

2. Tree Clearing

Ensure all required permits are approved and obtained prior to beginning construction. In the event of a conflict between multiple requirements and standards, the stricter of those laws will be applied and enforced. Perimeter sediment controls shall be installed prior to earth disturbing activities as directed by the Stormwater Pollution Prevention Plan (SWPPP).

The project area is primarily farmland, thus the amount of tree clearing is expected to be minimal. An environmental specialist(s) will be onsite during construction activities. The environmental specialist(s) shall be present during tree clearing, and any other vegetation clearing being performed in sensitive areas. Potential bat roost trees shall be avoided to the maximum extent possible and will be protected by adhering to the limits of disturbance. Prior to clearing and grubbing, a designated individual shall flag potential roost trees to be avoided that are located within the limits of disturbance. The flagged trees will then be fenced off to prevent damage during construction.

Wooden stakes will be used to delineate the centerline of roads and collection line for clearing. The width cleared for roads are determined by the construction plans. The limit of disturbance shall be written on the wooden stakes and will not be exceeded. The widths cleared for roads, collection lines, crane walks and erosion and storm water controls shall be only wide enough to complete the work. Special care should be taken by the Civil Superintendent to minimize the widths of linear clearing. For turbine sites, a 150 ft radius surrounding the center of the foundation shall be cleared, except when bordering environmentally sensitive areas.

2.a. Clearing in and Next to Streams and Wetlands

Clearing in and next to jurisdictional water bodies is anticipated to be necessary for the installation of collection lines and access roads in pre-approved locations. No high-quality or forested wetlands are expected to be impacted. The total disturbance to federally listed waters is anticipated to be less than 0.5 acres for the overall project and less than 0.1 acre per individual crossing. Please refer to the Civil Construction Plans and the Blue Creek Wetland Delineation Report for more information.

When clearing in riparian zones, the environmental specialist(s) shall oversee operations. Trees will be selectively hand-trimmed along the banks. Grubbing of the roots shall be avoided to the maximum extent possible. When grubbing is unavoidable, stream banks shall be stabilized immediately and restored pursuant to the SWPPP and conducted in accordance with the measures and conditions of the US Army Corps of Engineers Nationwide Permit.

2.b. Indiana Bat Habitat

The Indiana bat is a federally and state listed endangered species. The Indiana bat migrates to wooded areas in the summer to roost in tree hollows and under loose tree bark on dead or dying trees. The Ohio Power Siting Board has recommended that trees only be cleared between October 1 to March 31, to minimize potential impacts to Indiana bats that may roost within the project area. If construction is anticipated to take place near suitable Indiana bat habitat between April 1 to September 30, the area shall be roped off and "No Entry" signs posted.

Rhett Good of WEST, Inc. evaluated nine areas identified by Blattner as potentially needing minor tree clearing. Each area was visited on September 9 and 10, 2010. Most areas with tree clearing were comprised of narrow lines of small diameter trees along waterbodies. Areas within 100' of potential disturbance were searched for potential roost trees. Roost trees were defined conservatively as any live or dead tree greater than 2" in diameter with loose or exfoliating bark, or with a hollow cavity. While Indiana bats have been documented as utilizing roost trees as small as 2.5" in diameter, most Indiana bats utilize roost trees larger in size. Potential roost trees were located within approximately 100' of six of the nine areas identified by Blattner Energy (See Attachment 1), It is important to note that every tree listed in Attachment 1 is not located within areas slated for tree clearing. Potential roost tree locations within and outside of tree clearing areas are provided so that potential roost tree locations can either be avoided, and where locations cannot be avoided, locations can be cleared during time periods when Indiana bats are not expected to be present.

Trees are present within 100' of some areas to be cleared that have characteristics similar to trees utilized by bats as roost sites. It is important to note that the potential for use by bats does not equate to a potential to be used by Indiana bats. The potential for Indiana bat occurrence during the summer at the Site was considered low enough by the U.S. Fish and Wildlife Service and the Ohio Department of Natural Resources that neither agency recommended mist net surveys be conducted for the project, and neither agency stated the project contained suitable summer habitat for Indiana bats. While the Ohio Department of Natural Resources and the U.S. Fish and Wildlife Service do not believe the project contains suitable summer habitat, the Ohio Power Siting Board recommended that trees not be cleared at the project during the summer or spring migration seasons in order to protect Indiana bats. While the project appears to have a very low or no potential for summer Indiana bat occurrence, similar to any other location within the state of Ohio, the possibility of individual Indiana bats stopping over during migration and utilizing potential roost trees during migration cannot be ruled out.

Eleven of the potential roost trees were small in size or had only limited amounts of exfoliating bark, and were considered to have a relatively low potential to be used by bats as roost sites. The remaining 14 trees were considered to have moderate or high potential to be used by bats (Attachment 1).

3. DISPOSAL

Disposal options may vary depending on state and local regulations, landowner preferences, site management, and location.

3.a. Burning

Plant debris such as tree trimmings, stumps, brush, weeds, leaves, grass, shrubbery and crop residues may be burned if it is outside of city limits and with prior written permission from the Ohio EPA. Approval may take up to two weeks.

Open burning is not allowed when air pollution warnings, alerts or emergencies are in effect, or when dry ground conditions pose an increased risk of "wildfires". Fires cannot obscure visibility for roadways, railroad tracks or air fields. No wastes generated off site may be burned. The following wastes cannot be burned:

- Garbage
- Materials containing rubber, grease and asphalt or made from petroleum, such as tires, cars and auto parts, plastics or plastic- coated wire; and
- Dead animals.

3.b. Mulch

Blattner Energy, Inc may choose to mulch the cleared debris and use to stabilize immediately adjacent areas, consistent with the SWPPP, provided it is not used to mulch natural areas or other sites requiring vegetative restoration.

3.c. Haul to Landfill

Cleared trees and brush may be taken to a local landfill that accepts yard waste.

Attachment 1 – Tree Clearing Table

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Potential Roost Tree(s) present Within 100'?									
Forest	No	N _O	S S	Š	S S	Š	S S	S S	No
Provisional PHWH Class/ Use Designation ³	HMM	HMM	MWH	MWH	Modified Class II	Modified Class II	HMM	Modified Class II	Modified Class I
RPW or Non- RPW ²	Mda	Mda	RPW	RPW	RPW	RPW	RPW	RPW	RPW
Type of Crossing¹ (AR, CP, INT)	CP	CP	AR	CP	AR	එ	d)	AR	CP
Exhibit 2 Sheet #	7	2	11	51	1	Ξ	5	œ	12
N Latitude	40.9855 5	40.9629 5	40.9365 9	40.9279	40.9458	40.9455 9	40.9259	40.9659	40.9568 3
W Longitude	-84.6788	84.67098	84.69287	84.68421	84.68578	84.68806	84.67883	84.64862	84.62998
Stream Name	Upper Prairie Cr.	Prairie Cr.	Hagerman Cr.	Hagerman Cr.	UT to Prairie Cr.	UT to Prairie Cr.	Hagerman Cr.	UT to Prairie Cr.	UT to Hagerman Cr.
Waterbody	S005CA	S014CA	S019AA	S019AA	S021AA	S021AA	S028AA	S048CA	S052AA
Crossing	J-/2	13-CP	19-AR	20-CP	21-AR	21-CP-1	28-CP	48-AR	52-CP

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Potential Roost Tree(s) present Within 100'?			Yes							
Forest	N _O	ON.	\ \ \	No	o <mark>N</mark>	S.	No No	No No	ON O	ON O
Provisional PHWH Class/ Use Designation ³	Modified Class I	HWM	HWW	HWW	HWM	Modified Class I	MWH	Modified Class I	Modified Class I	Modified Class I
RPW or Non- RPW ²	RPW	RPW	Mda	RPW	RPW	Non-RPW	RPW	Non-RPW	Non-RPW	Non-RPW
Type of Crossing (AR, CP, INT)	CP	CP	8	G.	ಕಿ	ಕಿ	Ð	AR	GP CP	CP
Exhibit 2 Sheet #	27	12	4	- ω	80	80	ശ	o,	_O	တ
N Latitude	40.9386	40.9334	41.0067	40.9775	40.9799	40.9843	40.9933	40.9838	40.9852 8	40.9828
W Longitude	84.64579	84.64437	-84.65361	84.63646	84.62528	-84.62133	84.59854	-84.6015	84.60151	84.60152
Stream Name	UT to Hagerman Cr.	Haoeman Cr.	RI io Craek	Prairie Cr.	Prairie Cr.	UT to Prairie Cr.	Prairie Cr.	UT to Prairie Cr.	UT to Prairie Cr.	UT to Prairie Cr.
Waterbody	S039CA	S059CA	S069CA	S080AA	S082CA	S081CA	S145CA	S098AA	S098AA	S098AA
Crossing ID	58-CP	64-CP	dD-69	79-CP	84-CP	J-98	94-CP	99-AR	99-CP-1	99-CP-2

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Potential Roost Tree(s) present Within 100°?			S _O							N O
Forest Condition	N _O	N _O	Yes	2	S S	S S	S	o Z	o Z	Yes
Provisional PHWH Class/ Use Designation ³	MWH	Modified Class I	HWW	MWH	LRW	MWH	Modified Class II	Modified Class I	MWH	MWH
RPW or Non- RPW ²	RPW	RPW	RPW	RPW	RPW	RPW	RPW	RPW	RPW	RPW
Type of Crossing (AR, CP, INT)	СР	CP	CP	ಕಿ	ರಿ	ಕಿ	G.	CP	Ĉ	භ
Exhibit 2 Sheet #	13	13	13	က	S.	'n	ഹ	ဟ	တ	ဖ
N Latitude	40.9510 2	40.9407 6	40.9585	41.0065	40.9969	40.9990 6	41.0073	41.0117	41.0114	41.0011
w Longitude	84.59883	84.59158	84.58601	84.58293	84.59206	84.56522	84.56783	84.55334	84.55299	84.54666
Stream Name	Hagerman Cr.	UT to Pottawatomie Cr.	Hagerman Cr.	Prairie Cr.	UT to Prairie Cr.	Dry Cr.	UT to Dry Cr.	UT to Dry Cr.	Dry Cr.	Hagerman Cr.
Waterbody ID	\$115CA	S121CA	S126CA	S145CA	S145CB	S149CA	S153AA	S158CB	S158CA	S160CA
Crossing ID	116-CP	121-C-1	126-CP	144-C-2	145-CP	148-CP	154-CP	157-CP- 1	157-CP- 2	162-CP

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Potential Roost Tree(s) present Within 100'?		Yes	Yes					Yes	Yes	
Forest Condition	No	Yes	XeX	S.	o N	S S	No No	Yes	Yes	ON N
Provisional PHWH Class/ Use Designation ³	Modified Class II	HAW	MWH	MWH	MWH	MWH	MWH	HWM	MWH	HWH
RPW or Non- RPW ²	RPW	RPW	RPW	RPW	RPW	RPW	RPW	RPW	RPW	RPW
Type of Crossing ¹ (AR, CP, INT)	G _P	G _D	రి	ð	G	ಕಿ	ಕಿ	ಕಿ	ಕಿ	СР
Exhibit 2 Sheet #	ဖ	5	5	5	16	92	4	4	5	14
N Latitude	41.0076	40.9207	40.9229 9	40.9170	40.917	40.9240	40.9486	40.9588	40.9776	40.9378
W Longitude	-84.5343	84.55109	84.55979	-84.5313	84.52856	84.52182	-84.5303	84.54621	84.52121	84.54353
Stream Name	UT to Hagerman Cr.	Tawn Cr.	Maddox Cr.	UT to Town Cr.	UT to Town Cr.	UT to Town Cr.	Maddox Cr.	Hoaglin Cr.	Hoaglin Cr.	Maddox Cr.
Waterbody	S163AA	SEO1CA	S172TA	SE07CA	SE07CB	SE07CA	\$172TA	SE17CA	SE17CA	\$172TA
Crossing ID	164-CP	E1-CP	E3-CP	ES-CP-1	ES-CP-2	E7-CP	E16-CP	E17-CP	E28-CP	E29-CP

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Potential Roost Tree(s) present Within 100'?									ON
Forest	No	o <mark>N</mark>	N _O	No No	No	ON N	No	N _O	Yes
Provisional PHWH Class/ Use Designation³	Modified Class II	LRW	Modified Class I	LRW	Modified Class II	Modified Class I	Modified Class II	Modified Class II	
RPW or Non- RPW ²	RPW	RPW	RPW	RPW	RPW	RPW	RPW	RPW	Non-RPW
Type of Crossing (AR, CP, INT)	INT	INT	INT	INT	INT	_NI	TNI	TNI	
Exhibit 2 Sheet #	r.	ဟ	æ	œ	12	12	#	5	
N Latitude	41.0043	40.9899	40.9755	40.9752 6	40.9601	40.9602	40.9458	40.9166 8	N/A
W Longitude	84.57291	-84.59203	-84.63033	84.61117	-84.6486	-84.63004	84.68272	-84.6489	N/A
Stream Name	UT to Praine Cr.	UT to Prairie Cr.	UT to Hagerman Cr.	UT to Prairie Cr.	UT to Prairie Cr.	UT to Hagerman Cr.	UT to Prairie Cr.	UT to Hagerman Cr.	N/A
Waterbody ID	\$168CA	S145CB	S052AA	S100RA	S048CA	S052AA	S021AA	S044RA	N/A
Crossing	INT4	INT9	INT15	INT16	INT 20- 1/20-2	INT21	INT29	INT38	Blachely Road

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s)				
Potential Roost Tree(s) present Within 100'?	Yes			
Forest	sə _人			
Provisional PHWH Class/ Use Designation ³				
RPW or Non- RPW ²				Non-RPW
Type of Crossing (AR, CP, INT)				
Exhibit 2 Sheet #				
N Latitude				N/A
W Longitude				N/A
Stream Name				N/A
Crossing Waterbody ID ID				N/A
Crossing	Turbine	127	Access	Road

					Sloughing					
Site ID	Waypoint	Tree Species	DBH (in)	Height (ft)	Bark Present?	Cavity Present?	Notes	Suitability Rating ¹	LAT (NAD83)	LONG (NAD83)
69-CP	П	Unknown	4	15	Yes	No		Pow	41.00689410	-84.65352318
Access Road to T127	2	Ash	10	22	Yes	ON	Bark slightly sloughing	Low	40.95712286	-84.58206452
Access Road to T127	3	Unknown	5	30	Yes	No		row	40.95711934	-84.58199906
Access Road to T127	4	Unknown	10	30	Yes	No		Moderate	40.95690016	-84.58210803
Access Road to T127	5	Ash	6	35	Yes	No	Leaning Snag	Moderate	40.95601436	-84.58199839
Access Road to 7127	9	Shellbark Hickory	6 0	39	Yes	No	Live tree with exfoliating bark	Non	40.95592450	-84.58204282
Access Road to T127	9	Shellbark Hickory	5	39	Yes	No	Live tree with exfoliating bark	Low	40.95592450	-84.58204282
Access Road to T127	9	Shellbark Hickory	10	39	Yes	No	Live tree with exfoliating bark	Low	40.95592450	-84.58204282
Access Road to T127	7	Shellbark Hickory	5 to 10	20 to 30	Yes	No	5 live trees within 20' of this location	MOT	40.95918800	-84 58211959
408Z-3	8	Ash	6	25	Yes	No	Bark slightly sloughing, located 2 feet from another snag	LOW	40.97786103	-84.52090404
E-28CP	80	Ash	7	15	Yes	٥N	Leaning Snag, located 2 feet from another snag	Moderate	40.97786103	-84.52090404
E-28CP	6	Ash	16	3.5	Yes	Yes		High	40.97775266	-84.52133805
E-17CP	10	Sugar Maple	15	35	Yes	Yes		Moderate	40.95870512	-84.54655761
E-17CP	11	Ash	7	45	Yes	No	Two stems of one tree	Moderate	40.95869447	-84.54665316
E-17CP	11	Ash	12	90	Yes	No	Two stems of one tree	Moderate	40.95869447	-84.54665316
E-17CP	13	Sugar Maple	15	90	Yes	Yes	Two stems of one tree	Moderate	40.95865382	-84.54689515
E-17CP	13		80	25	Yes	No	Two stems of one tree	Moderate	40.95865382	-84.54689515
E-1CP	14	Unknown	5	20	Yes	No		LOW	40.92045883	-84.55099029
E-1CP	15	Black Willow	6	35	Хeх	No		Low	40.92036026	-84.55088829
E-3CP	16	Black Cherry	18	60	Yes	No		Moderate	40.92302428	-84.55936868
E-3CP	17	Sugar Maple	24	60	Yes	No	0.000	High	40.92299108	-84.55931034
E-3CP	18		15	65	Yes	No	Areas of sloughing bank were limited	Moderate	40.92319996	-84.55949985
E-3CP	19	Unknown	12	20	No	Yes	No bark present, but snag was hollow	Moderate	40.92299880	-84.55946431
E-3CP	20	White Oak	14	55	No	Yes	No peeling bank, but one cavity observed	, wor	40.92278766	-84.55964310
E-3¢P	Z	Unknown	14	35	Yes	Yes		High	40.92248582	-84.55948276
Rating as a potential bat roost.		Please note the overall potential for use by Indiana	ential for us	e by Indian		nsidered for	bats is considered low, based on lack of forest cover, and assessments of USFWS and ODNR.		¥	

Rating as a potential bat roost. Please note the overall potential for use by Indiana bats is considered low, based on lack of forest cover, and assessments of USPWS and ODNR.

Exhibit 2 – Figures











