TETRA TECH

TO: NextEra Energy Resources, LLC

FROM: Tetra Tech

DATE: 4/14/2016

SUBJECT: Brady Wind Energy Center Grouse Lek Survey Report

Introduction

Brady Wind, LLC (Brady Wind), a wholly-owned, indirect subsidiary of NextEra Energy Resources, LLC (NextEra) is developing the Brady Wind Energy Center (Project) located in Stark County, North Dakota (Figure 1). Brady Wind is committed to environmental due diligence and has contracted Tetra Tech, Inc. (Tetra Tech) to conduct sharp-tailed grouse lek surveys in the proposed Project Area and 1-mile buffer (Figure 1).

Sharp-tailed grouse are identified as Species of Conservation Priority in North Dakota's Wildlife Action Plan (Wildlife Action Plan). Species within the Wildlife Action Plan are categorized into three levels according to their conservation need. Sharp-tailed grouse are considered Level II Species, which are those species having a moderate level of conservation priority or a high level of conservation priority but a substantial level of non-state wildlife grant funding is available to them. Sharp-tailed grouse have experienced population declines linked to landscape level land use changes, primarily due to habitat loss through the conversion of grasslands to cropland. State and federal wildlife agencies have regularly expressed concern about the locations of wind turbines with respect to prairie grouse leks (communal male displaying grounds).

At NextEra's request, Tetra Tech requested the location of any known sharp-tailed grouse leks from the North Dakota Game and Fish Department (NDGF) on January 11, 2016. NDGF responded on February 3, 2016 that there are no documented leks in the Project Area or vicinity, but noted that the area has not been surveyed by NDGF. NDGF recommended that they help design the survey protocol. Tetra Tech provided the proposed protocol to NDGF on February 8, 2016, and received feedback from NDGF on March 9, 2016. NDGF supplied their standard protocol and suggested that Tetra Tech modify the survey protocol provided to NDGF so that listening stops be made every 0.5 mile rather than every 1 mile in all areas with grassland habitat. Tetra Tech modified the protocol to comply with NDGF by placing listening stops at 0.5 mile intervals in all areas with grassland habitat.

The objective of the grouse lek surveys was to document all sharp-tailed grouse leks within the Project Area and 1-mile buffer. Tetra Tech protocols for the grouse lek surveys were designed to be responsive to the level of effort recommended in Tier 3 of the voluntary U.S. Fish and Wildlife Service Land-Based Wind Energy Guidelines (WEG; USFWS 2012).

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Late-filed Exhibit 5 – Grouse Lek Survey Report
Brady Wind, LLC
Stephanie Dassinger, Crowley Fleck, PLLP

Methods

Prior to the field surveys, Tetra Tech prepared a preliminary desktop habitat assessment using the National Land Cover Database and aerial imagery to delineate suitable lek habitat within 1 mile of the Project Area. Open areas with grassland habitat were classified as suitable lek habitat and thus areas that needed searching. Possible listening stations were then mapped along public roads adjacent to this suitable grassland habitat. Based on this assessment, we identified 131 potential listening stations that fell on public roads next to grassland habitat within the survey area. Habitat suitability was verified by visually confirming the presence of grassland areas, and accessibility of the listening stations along the lek survey route was ground-truthed by biologists during the spring raptor nest surveys and during the first day of the lek surveys.

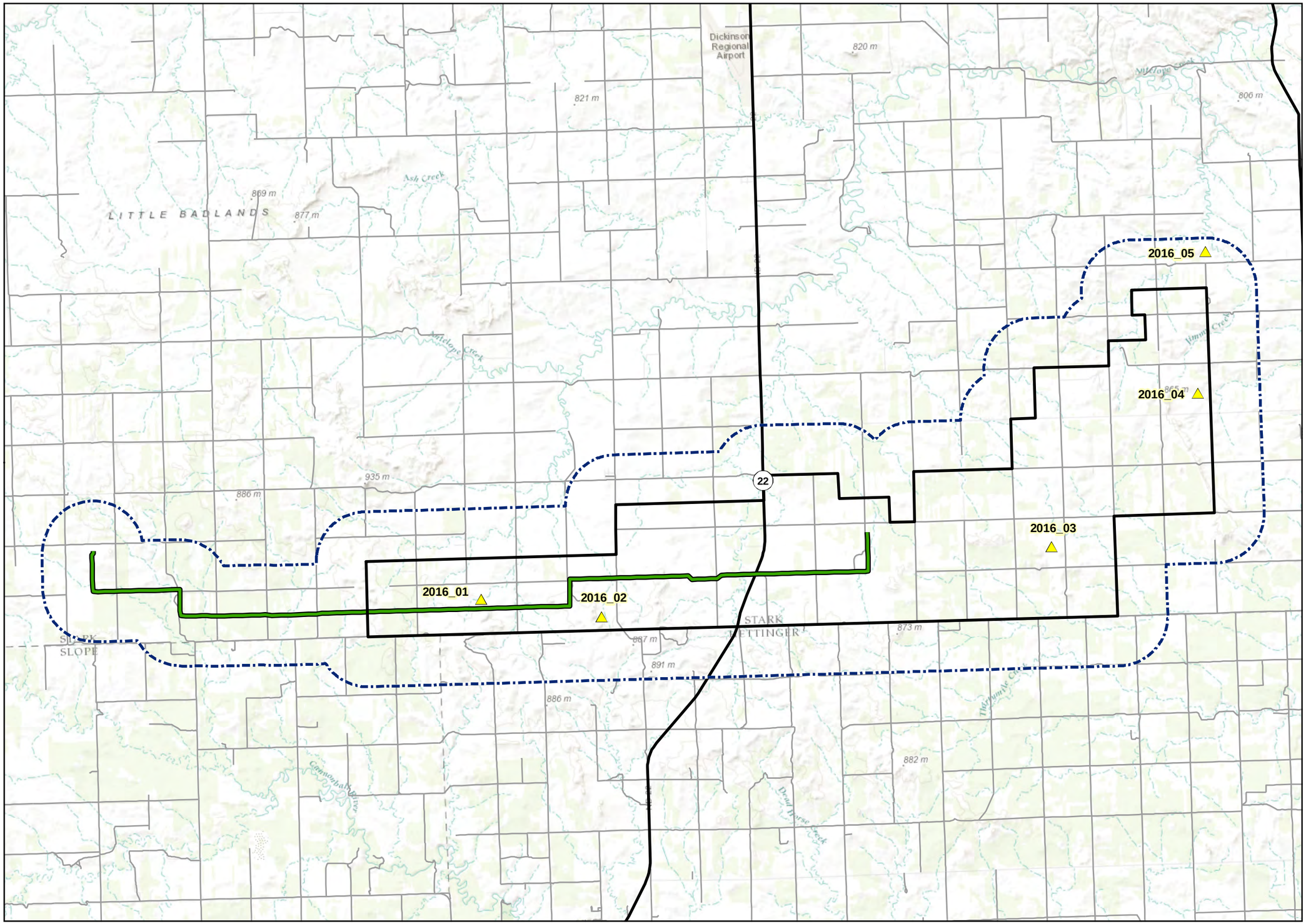
Ground surveys were conducted along public access roads in suitable habitat within one-mile of the Project Area between April 6 and 12, 2016. Surveys were conducted from one-half hour before sunrise to two hours after sunrise to coincide with peak lekking activity. During the surveys, observers stopped at listening stations located 0.5-mile apart for a minimum of 3 minutes during which time the observer systematically scanned and listened for displaying sharp-tailed grouse. Observed leks were mapped and numbers of males and females were counted if possible. The lek surveys were not conducted when winds exceeded 20 mph or if there was any type of precipitation event.

Results

Of the 131 listening stations identified during the desktop analysis, 106 were accessible by public roads, occurred in suitable habitat, and were surveyed. These listening stations were each surveyed once between April 6 -12. Five sharp-tailed grouse leks were documented in or within 1-mile of the Project Area during the surveys (Figure 1). The number of grouse observed at each lek ranged from 7 to 26 individuals. A total of 61 birds (21 males, 24 females, 16 unknown) were recorded at these leks, although this is a minimum count as not all birds were visible from the road.

References

USFWS (United States Fish and Wildlife Service). 2012. Land-based Wind Energy Guidelines. Available online at: http://www.fws.gov/windenergy/docs/WEG_final.pdf

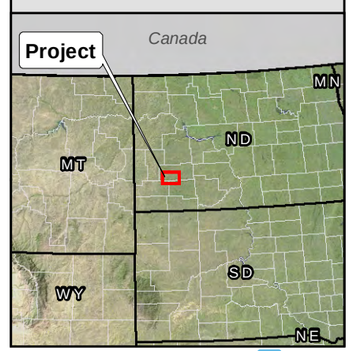


Brady
Wind Energy Center

Figure 1
Lek Survey Results

Stark County, ND
April 2016

- Lek
- Proposed Transmission Line (01-14-2016)
- Project Area
- Project Area 1-mile Buffer



TETRA TECH

1:120,000 WGS 1984 UTM Zone 13N

0 0.5 1 2 3 4 Miles

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