Appendix P – AM and FM Radio Report

Wind Power GeoPlanner™

AM and FM Radio Report

South Deuel Wind

Prepared on Behalf of
Invenergy

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COMSEARCH®
A CommScope Company

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1. Introduction

Comsearch analyzed AM and FM radio broadcast stations whose service could potentially be affected by the proposed South Deuel Wind Project in Deuel County, South Dakota.

2. Summary of Results

Project Information

Name: South Deuel Wind
County: Deuel
State: South Dakota

Number of Turbines: TBD
Blade Diameter: 164 meters
Hub Height: 98 meters

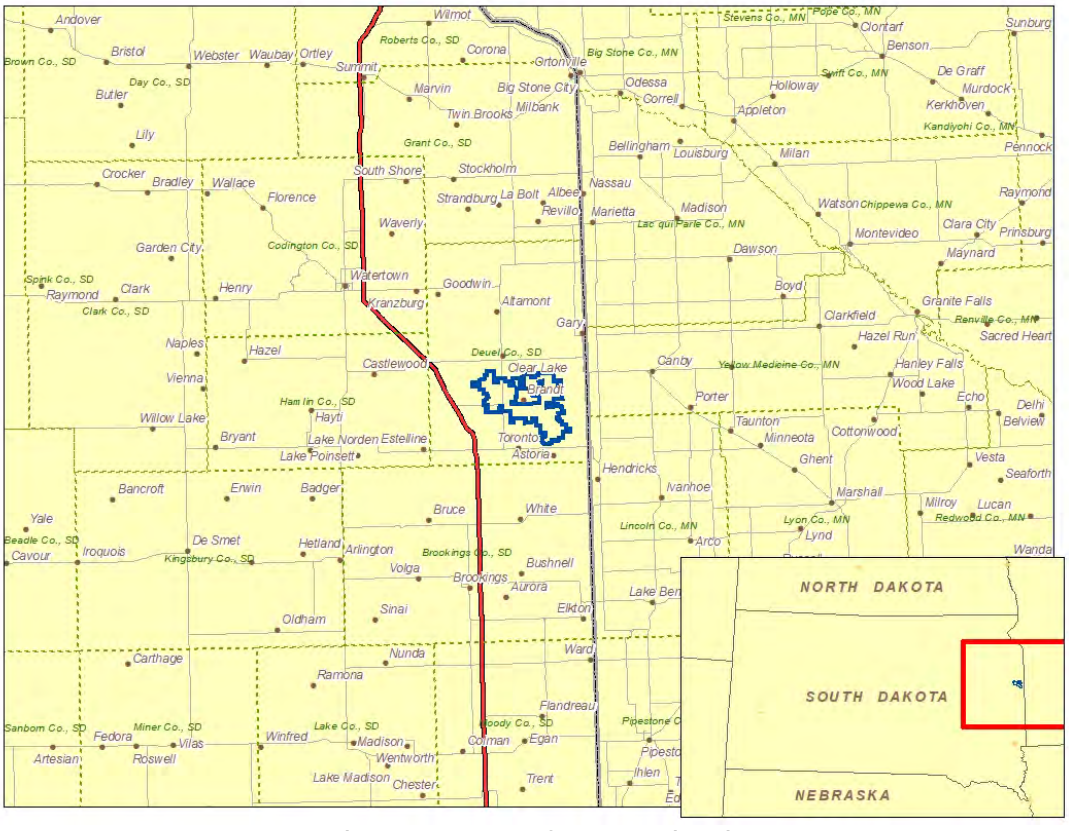

Figure 1: Area of Interest (AOI)

AM Radio Analysis

Comsearch found no database records[1] for AM stations within approximately 30 kilometers of the project.

FM Radio Analysis

Comsearch determined that there were two database records for FM stations within a 30-kilometer radius of the South Deuel Wind Project, as shown in Table 2 and Figure 2. One station is licensed and operating and the other is a translator station that operates with limited range. The closest station is KDBX, which is currently licensed out of Clear Lake, South Dakota, located 3.31 km to the south of the project AOI.

ID	Call Sign	Status[2]	Service[3]	Frequency (MHz)	Transmit ERP[4] (kW)	Latitude (NAD 83)	Longitude (NAD 83)	Distance to the Project AOI (km)
1	KDBX	FM	LIC	107.1	9.9	44.593583	-96.664222	3.31
2	K251CX	FX	APP	98.1	0.25	44.849111	-97.083167	30.05

Table 2: FM Radio Stations within 30 km

[1] Comsearch makes no warranty as to the accuracy of the data included in this report beyond the date of the report. The data presented in this report is derived from the AM/FM station's FCC license and governed by Comsearch's data license notification and agreement located at http://www.comsearch.com/files/data_license.pdf.

[2] LIC = Licensed and operational station; APP = Application for construction permit; CP=Construction permit granted; CP MOD = Modification of construction permit.

[3] FM = FM broadcast station; FX = FM translator station; FS = FM auxiliary (backup) station; FB = FM booster station.

[4] ERP = Transmit Effective Radiated Power.

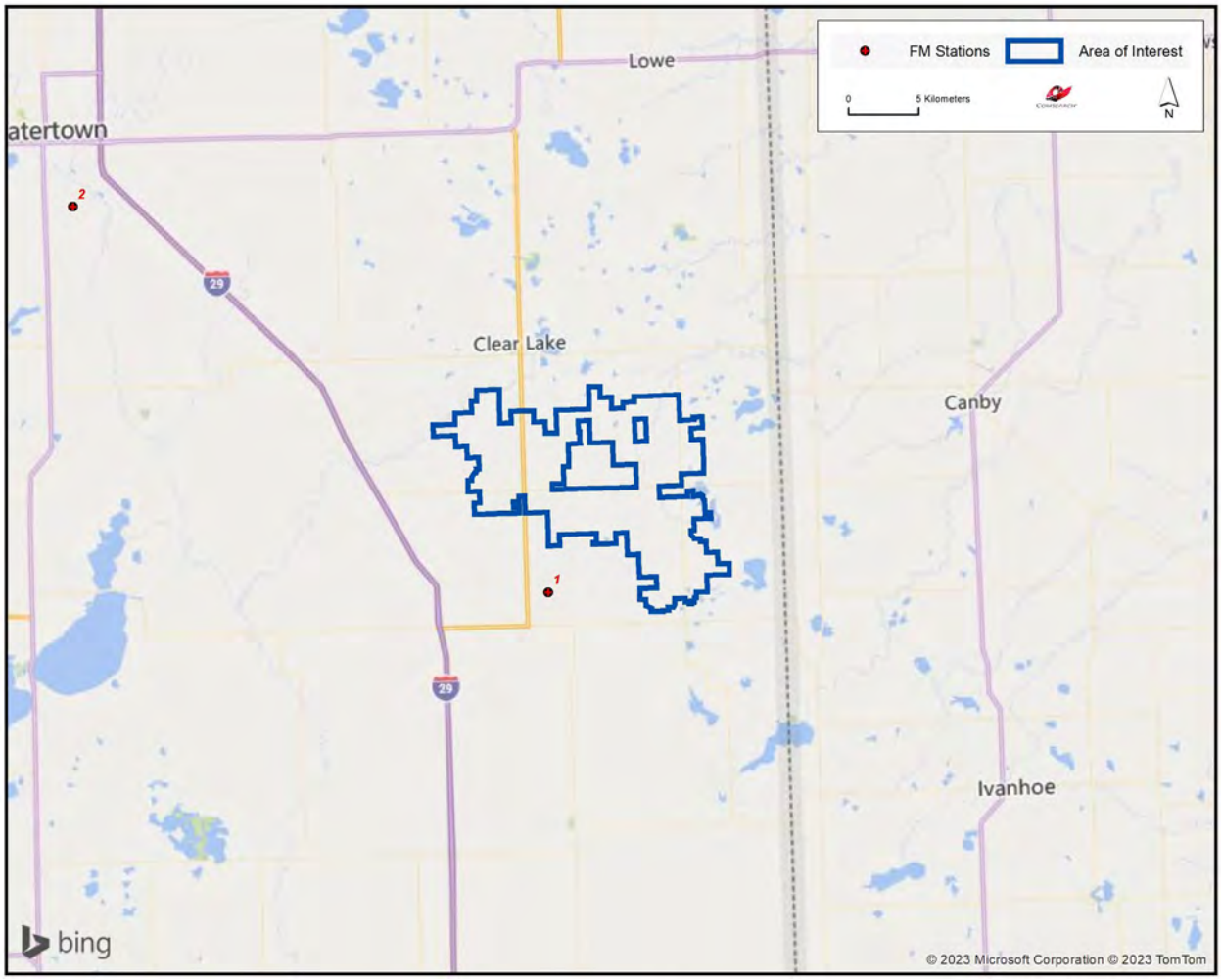

Figure 2: FM Radio Stations within 30 km

3. Impact Assessment

The exclusion distance for AM broadcast stations varies as a function of the antenna type and broadcast frequency. For directional antennas, the exclusion distance is calculated by taking the lesser of 10 wavelengths or 3 kilometers. For non-directional antennas, the exclusion distance is simply equal to 1 wavelength. Potential problems with AM broadcast coverage are only anticipated when AM broadcast stations are located within their respective exclusion distance limit from wind turbine towers. A search radius of 30 km found no AM station records. As there were no stations found within 3 kilometers of the project, which is the maximum possible exclusion distance based on a directional AM antenna broadcasting at 1000 KHz or less, the project should not impact the coverage of local AM stations.

The coverage of FM stations is generally not sensitive to interference due to wind turbines, especially when large objects (e.g., wind turbines) are located in the far field region of the radiating antenna to avoid the risk of distorting its radiation pattern. Station KDBX would be the nearest FM station to any given turbine at 3.31 km away. At this distance there should be adequate separation to avoid radiation pattern distortion.

4. Recommendations

Since no impact on licensed and operational AM or FM broadcast stations was identified in our analysis, no recommendations or mitigation techniques are required for this project.

5. Contact

For questions or information regarding the AM and FM Radio Report, please contact:

Contact person:	David Meyer
Title:	Senior Manager
Company:	Comsearch
Address:	21515 Ridgetop Circle, Suite 300, Sterling, VA 20166
Telephone:	703-726-5656
Fax:	703-726-5595
Email:	David.Meyer@CommScope.com
Web site:	www.comsearch.com