



Attachment 9

Project Summary and Final Site Plan to Microwave Transmission Providers

**Representative Project Summary and Final Site
Plan and Microwave Study to Microwave
Transmission Providers**



August 15, 2025

To: Ameren Services Company
ATTN: FCC License Coordinator
Richard A Hamilton
P.O. Box 66149
1901 Chouteau Avenue
St. Louis, MO 63166-6149

From: Coles Wind, LLC

Subject: Project Summary and Project Site Plan as required by Coles County WECS Ordinance

On July 1, 2025, the Coles County Board approved the Special Use Permit (SUP) Application for the Coles Wind Project (Ordinance No. 2025-02). As defined in the Coles County Wind Energy Conversion System (WECS) Ordinance, prior to the issuance of WECS Building Permits, Coles Wind shall provide a Project Summary and copy of the Site plan to microwave providers. Therefore, Coles Wind is providing you this Project Summary below and the attached Project Site Plan.

Coles Wind Project Summary

The Coles Wind Project (Project) ranges over roughly 19,500 acres of agricultural land (Project Area) in northern Coles County, Illinois. The Project is roughly bounded by the Douglas County line to the north, the Seven Hickory-Humboldt Township line to the west, County Road 2000E to the east, and E County Road 1200 N to the south in portions of Seven Hickory and Morgan Townships.

The Project capacity will be up to 311.1 MW nameplate generating capacity and will be comprised of 51 turbines. Coles Wind will use the GE 6.1-158 MW turbine at 383.9 feet (117 meters) hub height with a rotor diameter of 518.4 feet (158 meters) and a tip height of 643 feet (196 meters). In addition to the wind turbines, the Project will consist of:

- Access roads to each turbine;
- An underground 34.5 kilovolt (kV) electrical collection lines connecting the turbines to the Project Substation and associated facilities;
- An underground fiber-optic cable for turbine communications co-located with the collection lines;
- Light Detection and Ranging (LiDAR) systems to detect wind speed;
- An O&M Facility;
- One ADLS radar tower; and



- Temporary construction facilities such as a laydown yard and a concrete batch plant.

Electricity generated by the Project will be delivered to a single point of interconnection on the existing Ameren Kansas West to Faraday 345 kV transmission line running east-west between County Roads 1500N and 1600N and west of N county Road 1400E in the west central portion of the Project Area. Project facilities are included on the attached Site Plan.

Coles Wind has sited turbines to both avoid microwave beam path interference and be set back from communication towers hosting all types of telecommunication equipment, not just microwave antenna. Coles Wind also includes a copy of the microwave beam path study that reflects the turbine layout on the Project Site Plan.

Please contact either Alan Moore or Adam Carlson if you have any questions on these materials.

Regards,

Alan Moore

Alan Moore
Director of Development
Coles Wind, LLC
Apex Clean Energy
120 Garrett Street, Suite 700,
Charlottesville, VA 22902
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Adam Carlson

Adam Carlson
Senior Project Manager
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Apex Clean Energy
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Charlottesville, VA 22902
(217) 979-1607
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Coles Wind Project Site Plan

Project Facilities

-  Turbine*
-  ADLS
-  Permanent PPT/LiDAR
-  Temporary PPT/LiDAR
-  Access Roads
-  Underground Collection
-  Temporary Turn**
-  Project Substation
-  O&M
-  Switching Station***
-  Laydown Yard
-  Laydown/Batch Plant

-  Project Boundary
 County Boundary
 Existing 345kV Transmission
 Railroad
 State Highway
 County Road
 Township/Local Road

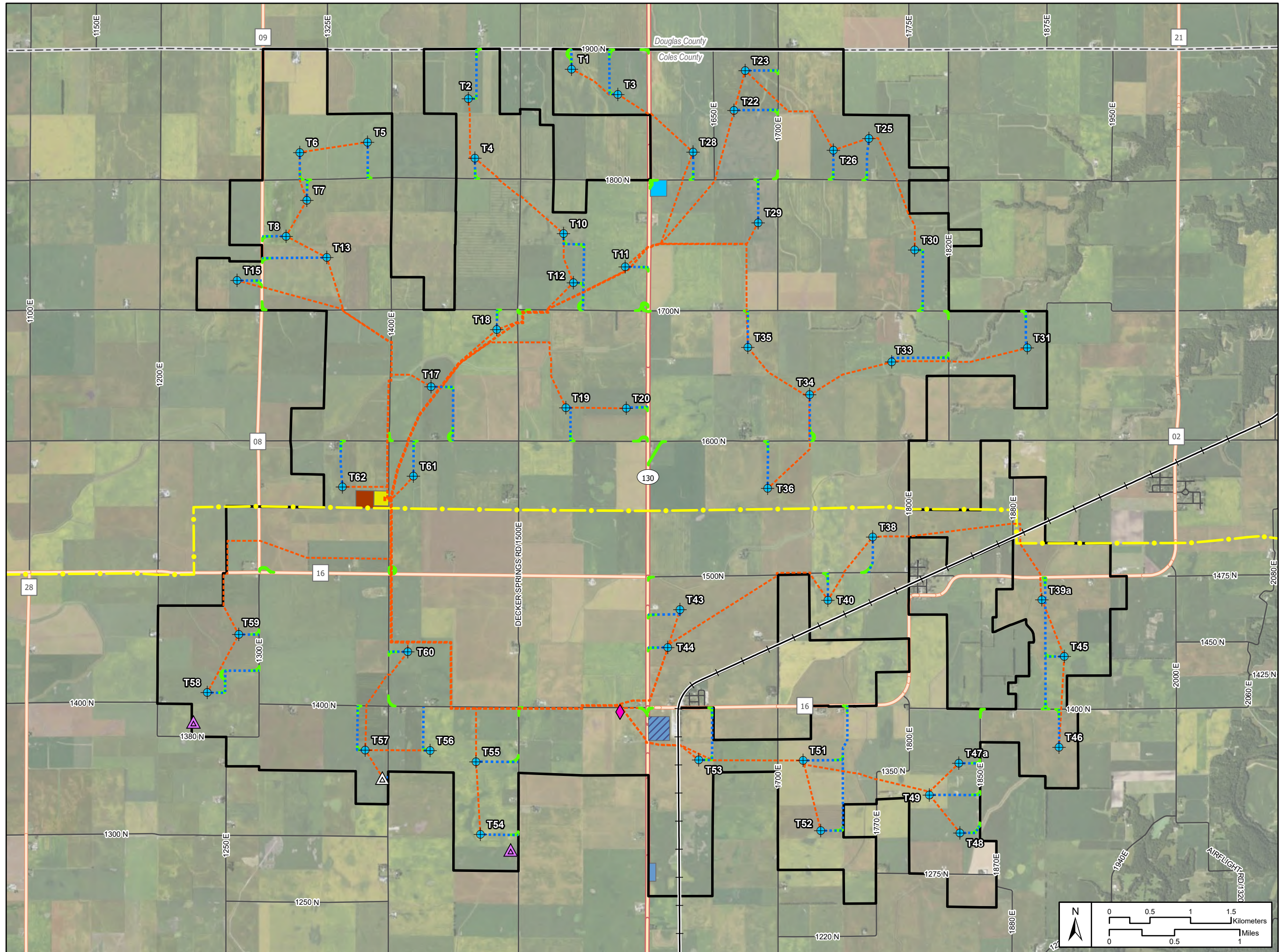
*Turbines are not drawn to scale.

****Temporary Turns are subject to Road Use Agreements.**

***Switching Station to be owned and operated by Ameren.

Date: 8/22/2025

Coordinate System: NAD 1983 StatePlane Illinois East FIPS 1201 Feet
Projection: Transverse Mercator
Datum: North American 1983
Units: Foot US





Wind Power GeoPlanner™
Microwave Study
Coles Wind Project

Prepared on Behalf of
Coles Wind, LLC

July 24, 2025

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1. Introduction

Microwave bands that may be affected by the installation of wind turbine facilities operate over a wide frequency range (900 MHz – 23 GHz). Comsearch has developed and maintains comprehensive technical databases containing information on licensed microwave networks throughout the United States. These systems are the telecommunication backbone of the country, providing long-distance and local telephone service, backhaul for cellular and personal communication service, data interconnects for mainframe computers and the Internet, network controls for utilities and railroads, and various video services. This report focuses on the potential impact of wind turbines on licensed, proposed and applied non-federal government microwave systems.

2. Project Overview

Project Information

Name: Coles Wind Project

County: Coles

State: Illinois

Number of Turbines: 51

Blade Diameter: 158 meters

Hub Height: 117 meters

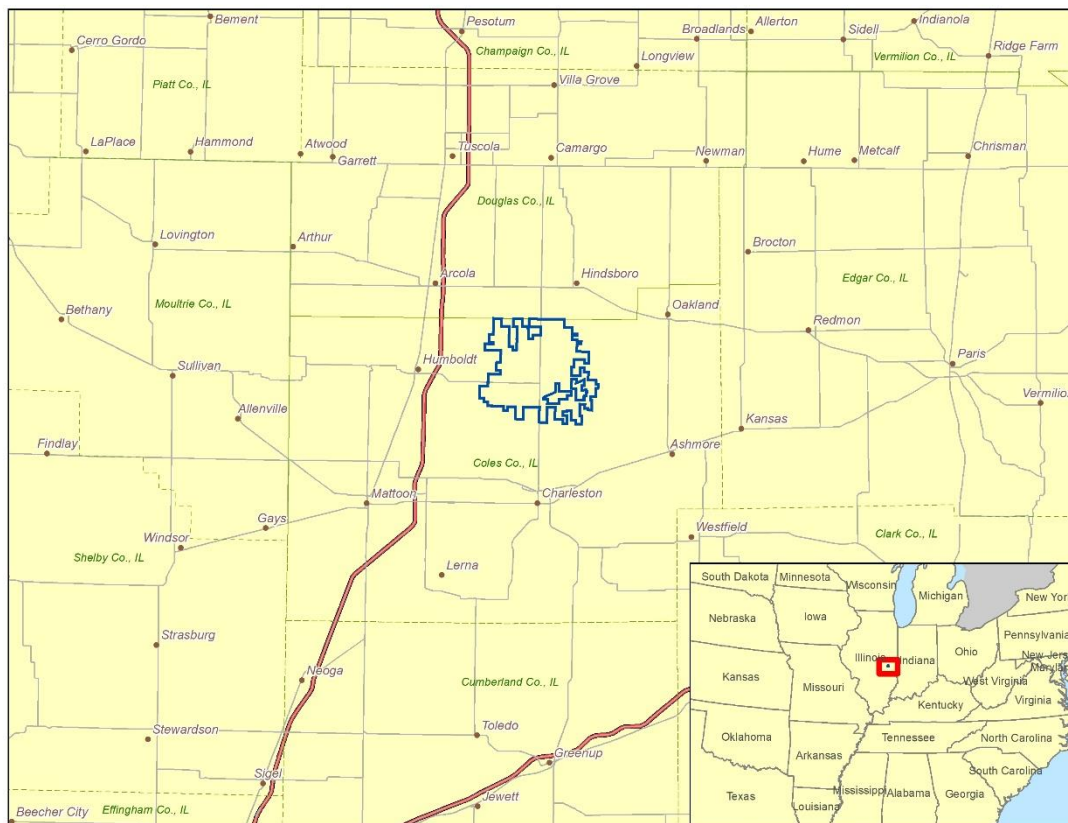


Figure 1: Area of Interest

3. Two-Dimensional Fresnel Zone Analysis

Methodology

Our obstruction analysis was performed using Comsearch's proprietary microwave database, which contains all non-government licensed, proposed and applied paths from 0.9 - 23 GHz¹. First, we determined all microwave paths that intersect the area of interest² and listed them in Table 1. These paths and the area of interest that encompasses the planned turbine locations are shown in Figure 2.

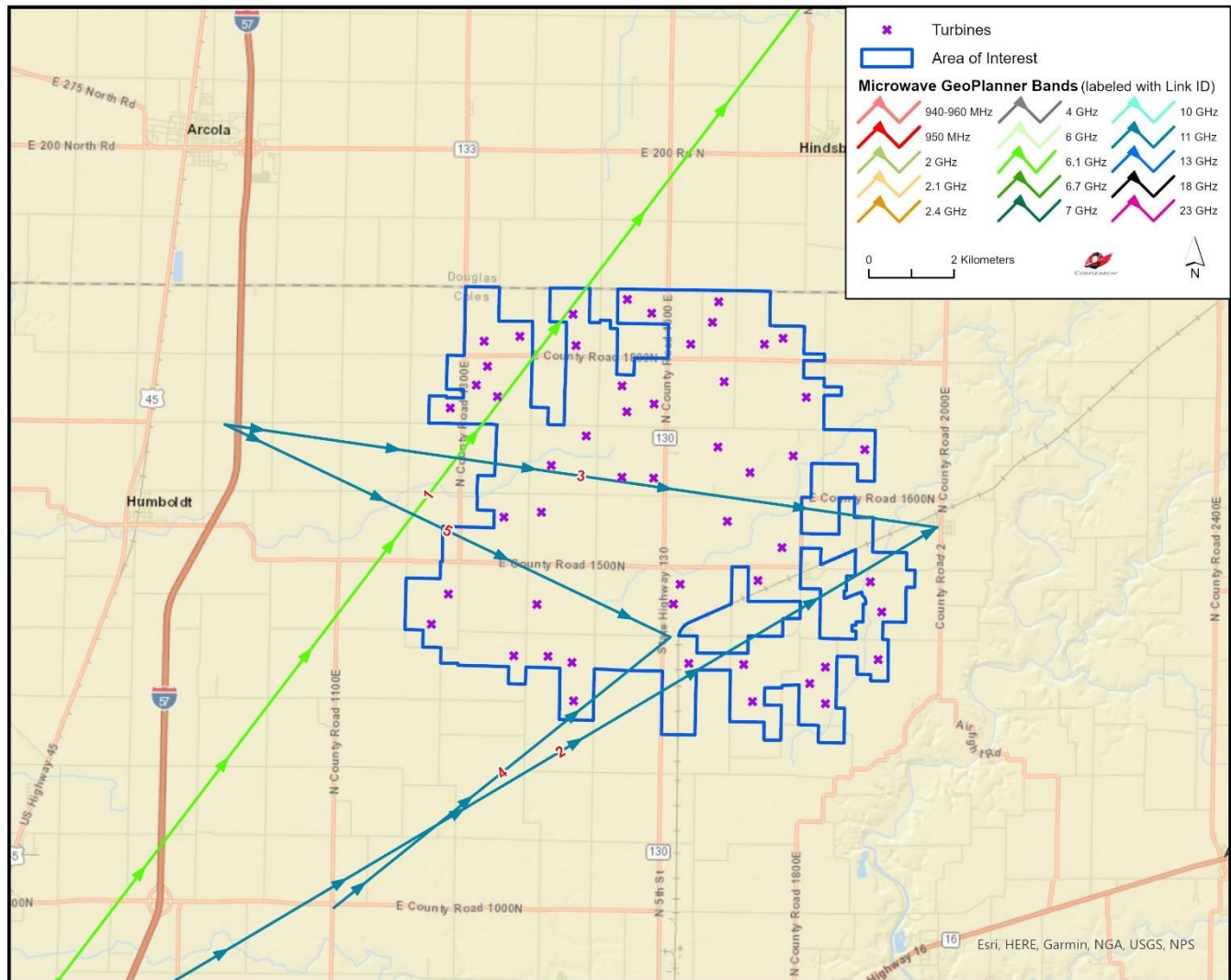


Figure 2: Microwave Paths that Intersect the Area of Interest

¹ Please note that this analysis does not include unlicensed microwave paths or federal government paths that are not registered with the FCC.

² We use FCC-licensed coordinates to determine which paths intersect the area of interest. It is possible that as-built coordinates may differ slightly from those on the FCC license.

ID	Status	Callsign 1	Callsign 2	Band	Path Length (km)	Licensee
1	Licensed	KSE47	KSI36	6.1 GHz	44.75	Ameren Services Company
2	Licensed	WRDQ712	WRDQ713	11 GHz	26.75	Consolidated Communications of Illinois
3	Licensed	WRUS245	WRUS244	11 GHz	16.90	T-Mobile MW LLC
4	Licensed	WRVI961	WRVA510	11 GHz	10.14	T-Mobile MW LLC
5	Applied	WRZN468	IL-FAIRG	11 GHz	11.59	AMG Technology Investment Group LLC

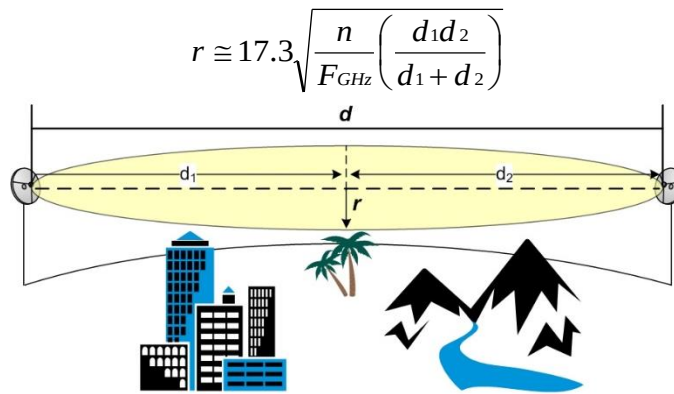
Table 1: Summary of Microwave Paths that Intersect the Area of Interest

(See enclosed *mw_geopl.xlsx* for more information and
GP_dict_matrix_description.xls for detailed field descriptions)

Verification of Coordinate Accuracy

It is possible that as-built coordinates may differ from those on the FCC license. For this project, all five path cross within close proximity of the proposed turbines and the tower locations for this path will have a critical impact on the result. Therefore, we verified these locations using aerial photography. One tower was found to be slightly off and was moved to its locations based on the aerial photos³.

Next, we calculated a Fresnel Zone for each path based on the following formula:



Where,

- r = Fresnel Zone radius at a specific point in the microwave path, meters
- n = Fresnel Zone number, 1
- F_{GHz} = Frequency of microwave system, GHz
- d_1 = Distance from antenna 1 to a specific point in the microwave path, kilometers
- d_2 = Distance from antenna 2 to a specific point in the microwave path, kilometers

³ See enclosed *mw_geopl.shp* (adjusted locations based on aerial photography/basis for report images and results) and *mw_geopl_fcc.shp* (locations solely based on FCC licensed information) for details.

In general, this is the area where the planned wind turbines should be avoided, if possible. Likewise, Comsearch recommends that an area directly in front of each microwave antenna should be avoided. This corresponds to the Consultation Zone which measures 1 kilometer along the main beam of the antenna and 24 ft (7.3 meters) wide. A depiction of the Fresnel Zones and Consultation Zones for each microwave path listed can be found in Figures 3 through 6, and is also included in the enclosed shapefiles^{4,5}.

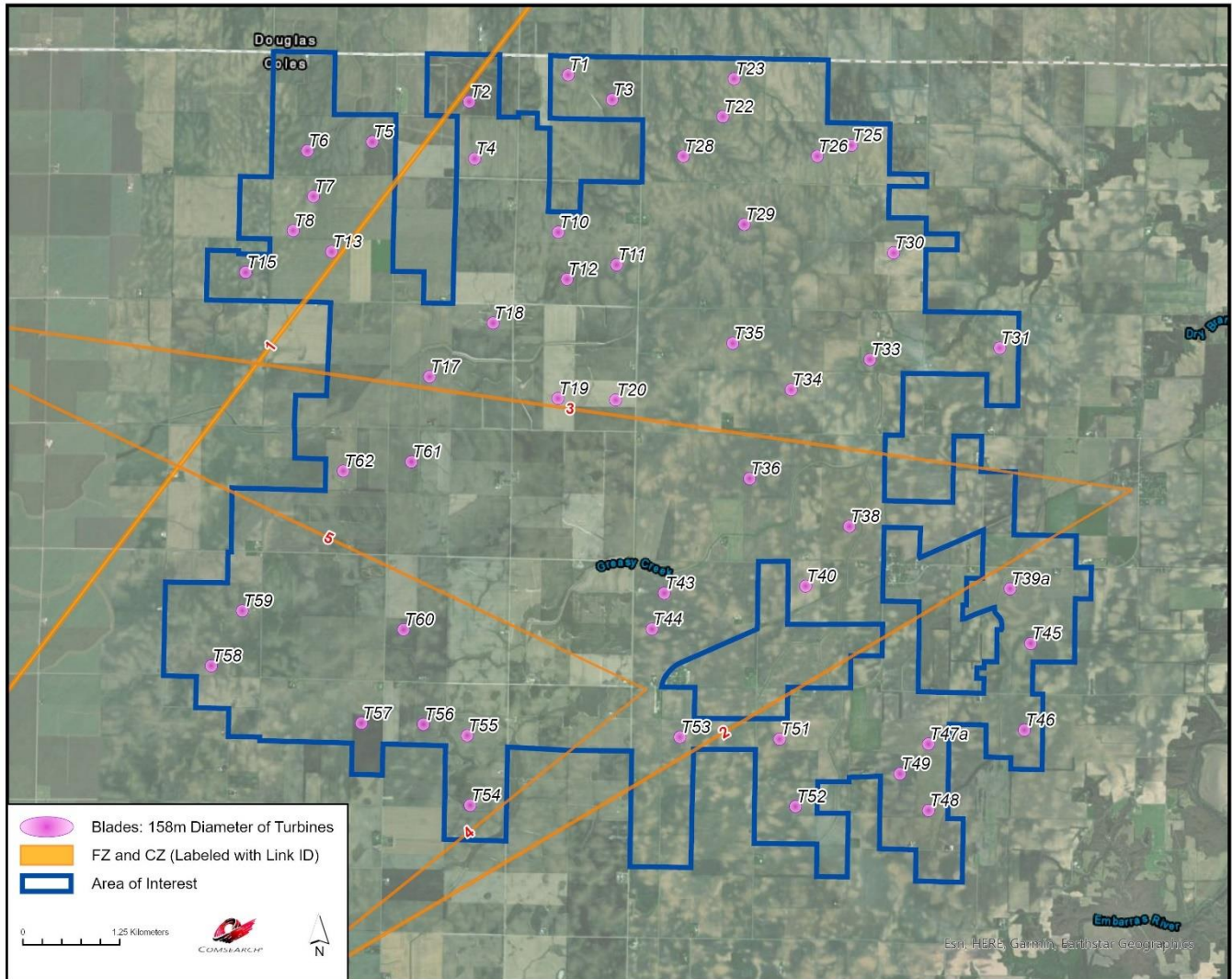


Figure 3: Microwave Paths with Fresnel Zones

⁴ The ESRI® shapefiles enclosed are in NAD 83 UTM Zone 16 projected coordinate system.

⁵ Comsearch makes no warranty as to the accuracy of the data included in this report beyond the date of the report. The data provided in this report is governed by Comsearch's data license notification and agreement located at http://www.comsearch.com/files/data_license.pdf.



Figure 4: Microwave Paths with Fresnel Zones (North)



Figure 5: Microwave Paths with Fresnel Zones (Center)

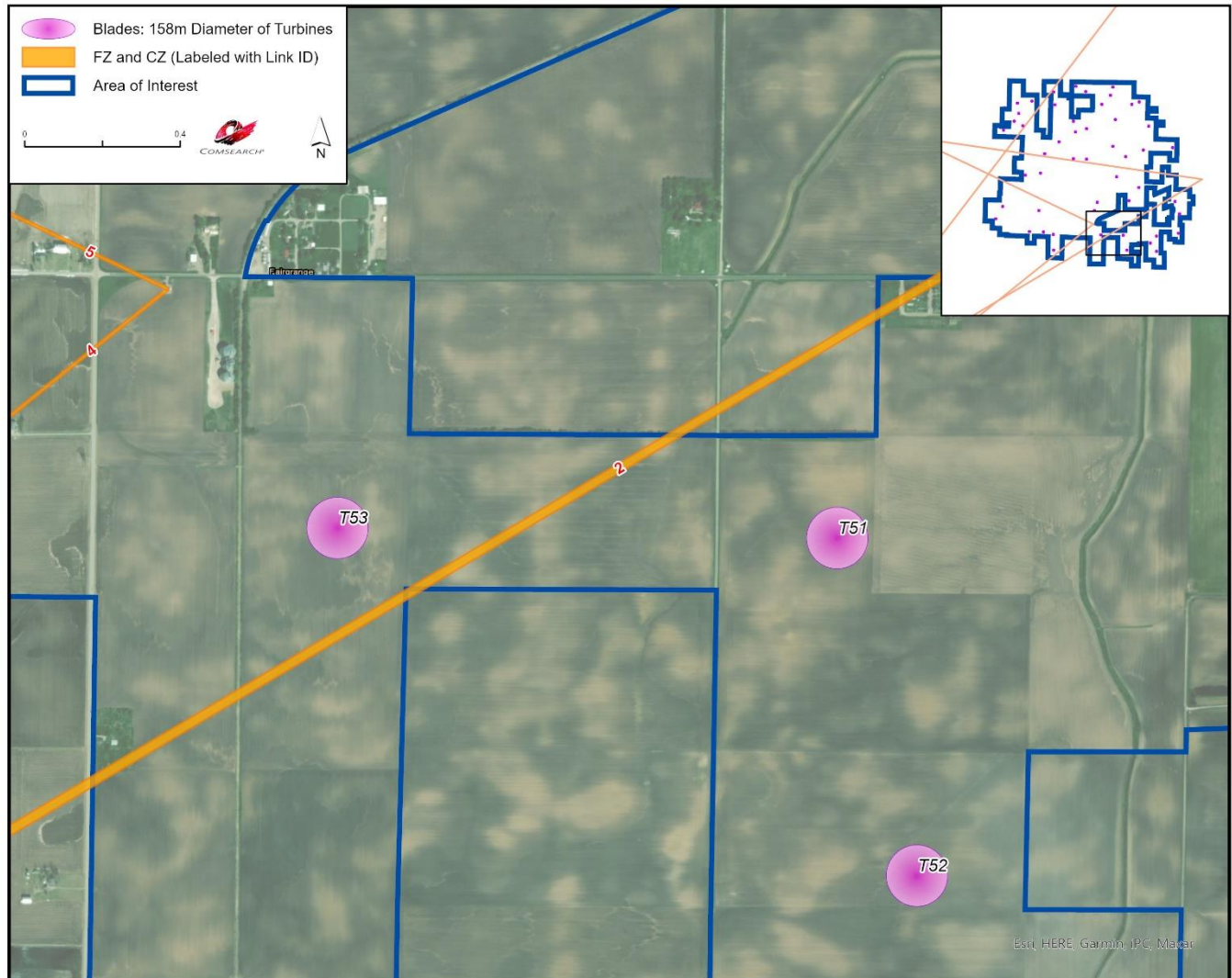


Figure 6: Microwave Paths with Fresnel Zones (South)

4. Conclusion

Total Microwave Paths	Paths with Affected Fresnel Zones	Total Turbines	Turbines intersecting the Fresnel Zones
5	0	51	0

Table 2: Fresnel Zone Analysis Result

Our study identified five microwave paths intersecting the Coles Wind Project area of interest. The Fresnel and Consultation Zones for these microwave paths were calculated and mapped in order to assess the potential impact from the turbines. A total of fifty-one turbines were considered in the analysis, each with a blade diameter of 158 meters. Of these turbines, none were found to have potential obstruction with the microwave systems in the area.

5. Contact

For questions or information regarding the Microwave Study, 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: DMeyer@comsearch.com
Web site: www.comsearch.com

Appendix: Turbine Locations

ID	Latitude	Longitude
T1	39.649995	-88.188005
T2	39.646727	-88.202823
T3	39.647183	-88.181358
T4	39.640117	-88.201895
T5	39.641917	-88.217304
T6	39.640777	-88.227044
T7	39.635483	-88.226039
T8	39.631481	-88.229020
T10	39.631708	-88.189183
T11	39.628019	-88.180345
T12	39.626261	-88.187792
T13	39.629093	-88.223195
T15	39.626564	-88.236070
T17	39.614735	-88.208232
T18	39.621062	-88.198786
T19	39.612409	-88.188892
T20	39.612310	-88.180226
T22	39.645392	-88.164683
T23	39.649785	-88.163058
T25	39.642241	-88.145311
T26	39.640932	-88.150410
T28	39.640726	-88.170557
T29	39.632904	-88.161243
T30	39.629819	-88.138768
T31	39.618923	-88.122631
T33	39.617396	-88.142108
T34	39.613774	-88.153886
T35	39.619080	-88.162749
T36	39.603394	-88.159948
T38	39.597987	-88.144878
T39a	39.590987	-88.120622
T40	39.590992	-88.151334
T43	39.589955	-88.172555
T44	39.585767	-88.174319
T45	39.584660	-88.117432
T46	39.574592	-88.118216
T47a	39.572840	-88.132593
T48	39.565118	-88.132451
T49	39.569341	-88.136830
T51	39.573187	-88.154941
T52	39.565394	-88.152425
T53	39.573270	-88.169910
T54	39.565034	-88.201263
T55	39.573124	-88.201857

ID	Latitude	Longitude
T56	39.574363	-88.208448
T57	39.574408	-88.217758
T58	39.580814	-88.240424
T59	39.587266	-88.235878
T60	39.585320	-88.211622
T61	39.604831	-88.210781
T62	39.603647	-88.220991

**Summary Table of Microwave Beam Paths and
Microwave Transmission Provider Contact
Information**



Summary of Microwave Beam Paths that intersect the Coles Wind Project Area – call signs and contact information for the licensee and contact registered with the Federal Communications Commission.

Call Signs	Licensee	Contact
KSE47 and KSI36	Ameren Services Company ATTN: FCC License Coordinator Richard A Hamilton P.O. Box 66149 1901 Chouteau Avenue St. Louis, MO 63166-6149	Ameren Services Company ATTN: FCC License Coordinator Richard A Hamilton P.O. Box 66149 1901 Chouteau Blvd St. Louis, MO 63166-6149
WRDQ712 and WRDQ713	Consolidated Communications of Illinois Company, LLC ATTN: Scott Kitchen 350 S. Loop 336 W Conroe, TX 77304	Morgan, Lewis & Bockius LLP ATTN: Joshua M Bobeck 1111 Pennsylvania Avenue, NW Washington, DC 20004
WRUS245 and WRUS244	T-Mobile MW LLC ATTN: FCC Regulatory Compliance 12920 SE 38th Street Bellevue, WA 98006	T-Mobile MW LLC ATTN: FCC Regulatory Compliance 12920 SE 38th Street Bellevue, WA 98006
WRVI961 and WRVA510	T-Mobile MW LLC ATTN: FCC Regulatory Compliance 12920 SE 38th Street Bellevue, WA 98006	T-Mobile USA, Inc. FCC Regulatory Compliance 12920 SE 38th Street Bellevue, WA 98006
WRZN468 and IL-FAIRG	AMG Technology Investment Group, LLC ATTN: Jack Marsh 95 Parker Oaks Lane Hudson Oaks, TX 76087	AMG Technology Investment Group, LLC ATTN: Jack Marsh 95 Parker Oaks Lane Hudson Oaks, TX 76087
Contact information from FCC Universal Licensing System for each Call Sign.		

Proof of Mailing

From: no-reply@pb.com
To: [Brie Anderson](#)
Subject: A shipment from Lara Nichols is on its way
Date: Friday, August 22, 2025 10:46:27 AM



[PitneyShip™ Portfolio](#)

Shipment Created - USPS2222999887824664

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TRACKING NUMBER

ESTIMATED DELIVERY

USPS

[9407109898643072936540](#)

Shipped on	2025-08-22
Carrier	USPS
Ship To	RICHARD A HAMILTON, FCC LICENSE CORD. AMEREN SERVICES COMPANY PO BOX 66149 1901 CHOUTEAU AVE SAINT LOUIS, MO, 63166-6149 US
Memo	
Service	First-Class Mail®
Signature Required	Yes
Sender Name	Lara Nichols
Sender Company	Apex Clean Energy
Recipient Name	Richard A Hamilton, FCC License Cord.
Recipient Company	Ameren Services Company

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ESTIMATED DELIVERY

USPS

[9407109898643573121995](#)

Shipped on	2025-08-22
Carrier	USPS
Ship To	SCOTT KITCHEN CONSOLIDATED COMMUNICATIONS OF IL CO 350 S LOOP 336 W CONROE, TX, 77304-3308 US
Memo	
Service	First-Class Mail®
Signature Required	Yes
Sender Name	Lara Nichols
Sender Company	Apex Clean Energy
Recipient Name	Scott Kitchen
Recipient Company	Consolidated Communications of IL Co

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USPS

[9407109898643573121490](#)

Shipped on	2025-08-22
Carrier	USPS
Ship To	JOSHUA M BOBECK MORGAN, LEWIS & BOCKIUS LLP 1111 PENNSYLVANIA AVENUE, NW WASHINGTON, DC, 20004 US
Memo	
Service	First-Class Mail®
Signature Required	Yes
Sender Name	Lara Nichols
Sender Company	Apex Clean Energy
Recipient Name	Joshua M Bobeck
Recipient Company	Morgan, Lewis & Bockius LLP

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TRACKING NUMBER

ESTIMATED DELIVERY

USPS

[9407109898643072936144](#)

Shipped on	2025-08-22
Carrier	USPS
Ship To	FCC REGULATORY COMPLIANCE T-MOBILE MW LLC 12920 SE 38TH ST BELLEVUE, WA, 98006 US
Memo	
Service	First-Class Mail®
Signature Required	Yes
Sender Name	Lara Nichols
Sender Company	Apex Clean Energy
Recipient Name	FCC Regulatory Compliance
Recipient Company	T-Mobile MW LLC

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TRACKING NUMBER

ESTIMATED DELIVERY

USPS

[9407109898643072935659](#)

Shipped on	2025-08-22
Carrier	USPS
Ship To	JACK MARSH AMG TECHNOLOGY INVESTMENT GROUP, LLC 95 PARKER OAKS LANE HUDSON OAKS, TX, 76087 US
Memo	
Service	First-Class Mail®
Signature Required	Yes
Sender Name	Lara Nichols
Sender Company	Apex Clean Energy
Recipient Name	Jack Marsh
Recipient Company	AMG Technology Investment Group, LLC

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