Wind Power GeoPlanner™

AM and FM Radio Report

Hoffman Falls

Prepared on Behalf of
Liberty Renewables
Inc.

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1. Introduction

Comsearch analyzed AM and FM radio broadcast stations whose service could potentially be affected by the proposed Hoffman Falls Wind Project in Madison County, New York (the Project).

2. Summary of Results

AM Radio Analysis

Comsearch found five database records[1] for AM stations within approximately 30 kilometers of the Project, as shown in Table 1 and Figure 1. The closest record, WMCR, which broadcasts out of Oneida, New York, is located to the north of the Project area of interest (AOI), 14.40 km from the nearest turbine location. WMCR is licensed to operate at two different power levels, a higher transmit power for daytime operations and a lower transmit power for nighttime operations.

ID	Call Sign	Status[2]	Frequency (kHz)	Transmit ERP[3] (kW)	Operation Time	Latitude (NAD 83)	Longitude (NAD 83)	Required Separation Distance[4] (km)	Distance to Nearest Turbine (km)
1	WMCR	LIC	1600	1.0	Daytime	43.084511	-75.692683	0.19	14.40
2	WMCR	LIC	1600	0.02	Nighttime	43.084511	-75.692683	0.19	14.40
3	WSKO	LIC	1260	5.0	Daytime	43.025622	-76.064922	2.38	25.24
4	WSKO	LIC	1260	5.0	Nighttime	43.025622	-76.064922	2.38	25.24
5	WSIV	LIC	1540	1.0	Daytime	43.094511	-76.032975	0.19	26.62

Table 1: AM Radio Stations within 30 Kilometers of Project Area

[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] ERP = Transmit Effective Radiated Power.

[4] The required separation distance is based on the lesser of 10 wavelengths or 3 kilometers for directional antennas and 1 wavelength for non-directional antennas.

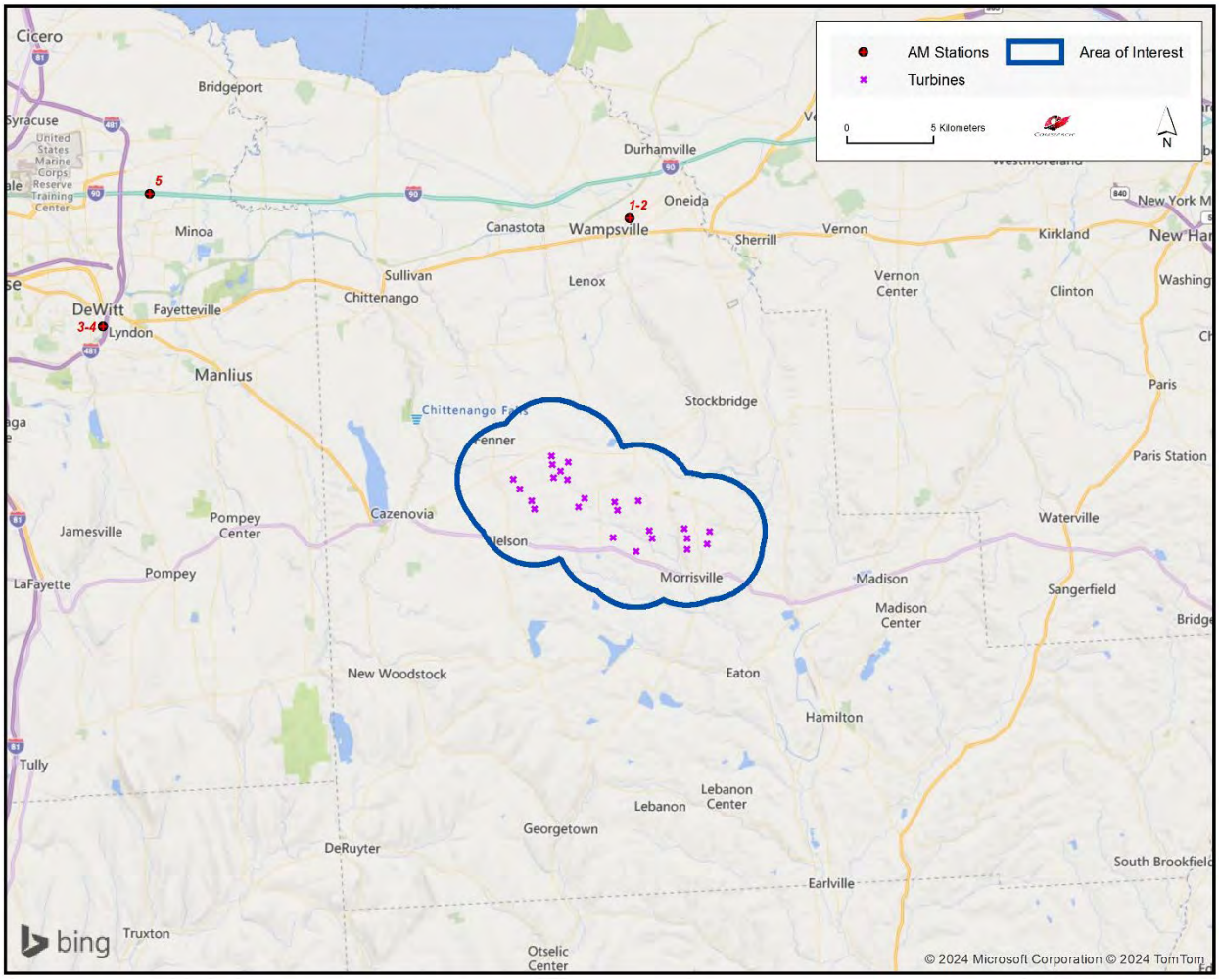

Figure 1: AM Radio Stations within 30 Kilometers

FM Radio Analysis

Comsearch determined that there were twenty-seven database records for FM stations within a 30-kilometer radius of the Project, as shown in Table 2 and Figure 2. All of the stations are currently licensed and operating, seven of which are auxiliary (backup) stations and six of which are translator stations that operate with limited range. The closest station to the Project, WMVQ, which is currently licensed in Fenner, New York, is located inside the northwest corner of the Project AOI, 2.54 km from the nearest turbine location.

ID	Call Sign	Service[5]	Status[6]	Frequency (MHz)	Transmit ERP[7] (kW)	Latitude (NAD 83)	Longitude (NAD 83)	Distance to Nearest Turbine (km)
1	WMVQ	FM	LIC	90.5	0.049	42.970056	-75.784889	2.54
2	W268AE	FX	LIC	101.5	0.075	43.065889	-75.667667	13.18
3	W279CK	FX	LIC	103.7	0.1	43.065889	-75.667667	13.18
4	W257BE	FX	LIC	99.3	0.012	42.811722	-75.532667	14.32
5	WRCU-FM	FM	LIC	90.1	1.9	42.811278	-75.533444	14.32
6	W266DJ	FX	LIC	101.1	0.25	43.084500	-75.692667	14.40
7	WCIS-FM	FM	LIC	105.1	33.0	42.782833	-75.840722	18.02
8	WCIS-FM	FS	LIC	105.1	1.15	42.782833	-75.840722	18.02
9	WCIT-FM	FM	LIC	106.3	1.75	43.036722	-75.443500	20.08
10	WUMX	FM	LIC	102.5	27.0	43.037278	-75.444056	20.09
11	WSKS	FM	LIC	97.9	1.5	43.037306	-75.444056	20.09
12	WNTQ	FM	LIC	93.1	97.0	42.946722	-76.024083	20.44
13	WNTQ	FS	LIC	93.1	41.0	42.946722	-76.024083	20.44
14	WFRG-FM	FM	LIC	104.3	100.0	43.056444	-75.416833	23.15
15	WFRG-FM	FS	LIC	104.3	10.0	43.056444	-75.416833	23.15
16	WFRG-FM	FS	LIC	104.3	10.0	43.057583	-75.417389	23.20
17	WHCL-FM	FM	LIC	88.7	0.27	43.051167	-75.406278	23.46
18	W237AY	FX	LIC	95.3	0.25	43.007000	-76.093528	26.88
19	WAQX-FM	FM	LIC	95.7	25.0	43.007000	-76.093528	26.88
20	WAQX-FM	FS	LIC	95.7	20.0	43.007000	-76.093528	26.88
21	WWHT	FM	LIC	107.9	50.0	42.955889	-76.109639	27.43
22	WTKW	FM	LIC	99.5	5.7	43.156722	-75.956583	27.49
23	WTKW	FS	LIC	99.5	3.2	43.156722	-75.956583	27.49
24	WYYY	FS	LIC	94.5	25.0	42.946167	-76.117972	28.10
25	WYYY	FM	LIC	94.5	100.0	42.946167	-76.118250	28.12
26	WCNY-FM	FM	LIC	91.3	8.3	42.944944	-76.118389	28.13

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

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

[7] ERP = Transmit Effective Radiated Power.

ID	Call Sign	Service[5]	Status[6]	Frequency (MHz)	Transmit ERP[7] (kW)	Latitude (NAD 83)	Longitude (NAD 83)	Distance to Nearest Turbine (km)
27	W229CU	FX	LIC	93.7	0.055	43.036500	-76.119083	29.80

Table 2: FM Radio Stations within 30 km

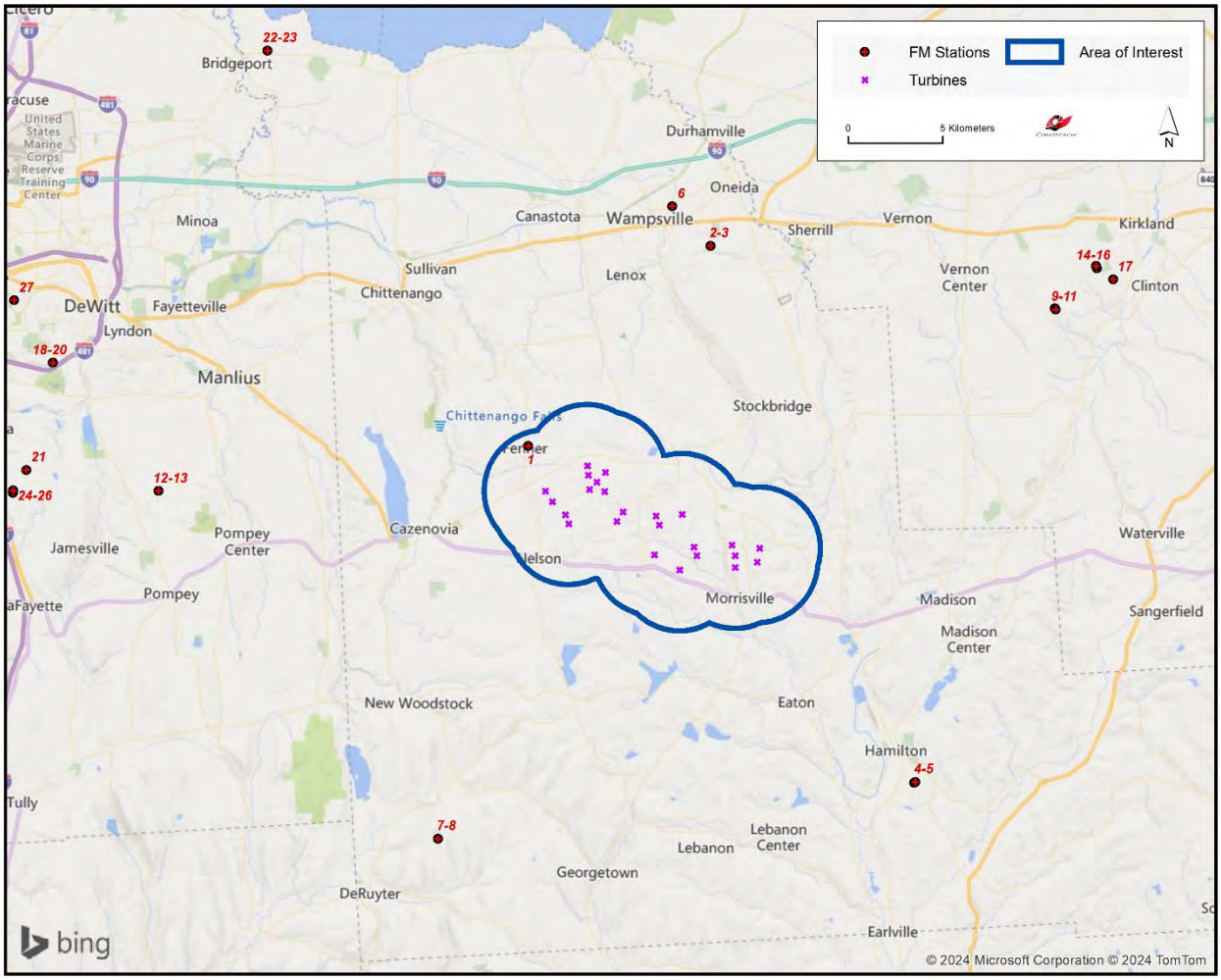

Figure 2: FM Radio Stations within 30 km

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. The closest AM station (WMCR) is located 14.40 km from the nearest turbine location. 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. This is especially true when large objects (e.g., wind turbines) are located in the far field region of the radiating antenna, which avoids the risk of distorting its radiation pattern. Station WMVQ, located approximately 2.54 km from the nearest proposed wind turbine, is the closest FM station. At this distance there should be adequate separation to avoid radiation pattern distortion.

4. Recommendations

Since no impact on the 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

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