Wind Power GeoPlanner™

Off-Air TV Analysis

115-kV Transmission Line in Steuben County, NY

Prepared on Behalf of
Eight Point Wind, LLC

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COMSEARCH®
A CommScope Company

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1. Introduction

Off-air television stations broadcast signals from terrestrially-based facilities directly to television receivers. Comsearch identified those off-air stations whose service could potentially be affected by the proposed 115-kV transmission line project in Steuben County, New York. Comsearch then examined the coverage of the stations and the communities in the area that could potentially have degraded television reception due to the location of the transmission line.

2. Summary of Results

The proposed wind energy project area and local communities are depicted in Figure 1, below.

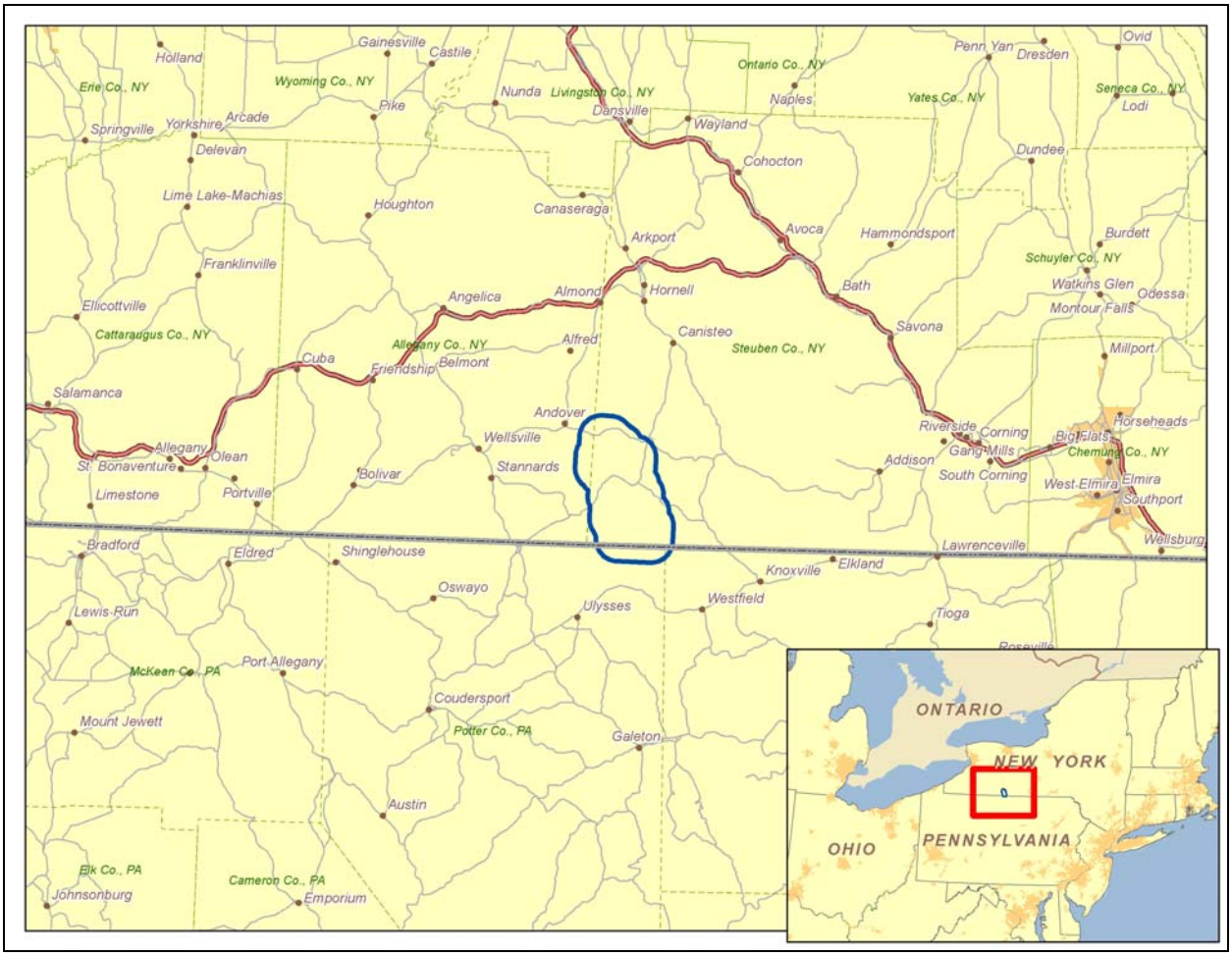

Figure 1: Wind Farm Project Area and Local Communities

To begin the analysis, Comsearch compiled all off-air television stations[1] within 150 kilometers of the transmission line. Appendix A contains a tabular summary of these stations. A plot depicting their locations appears in Figure 2, below.

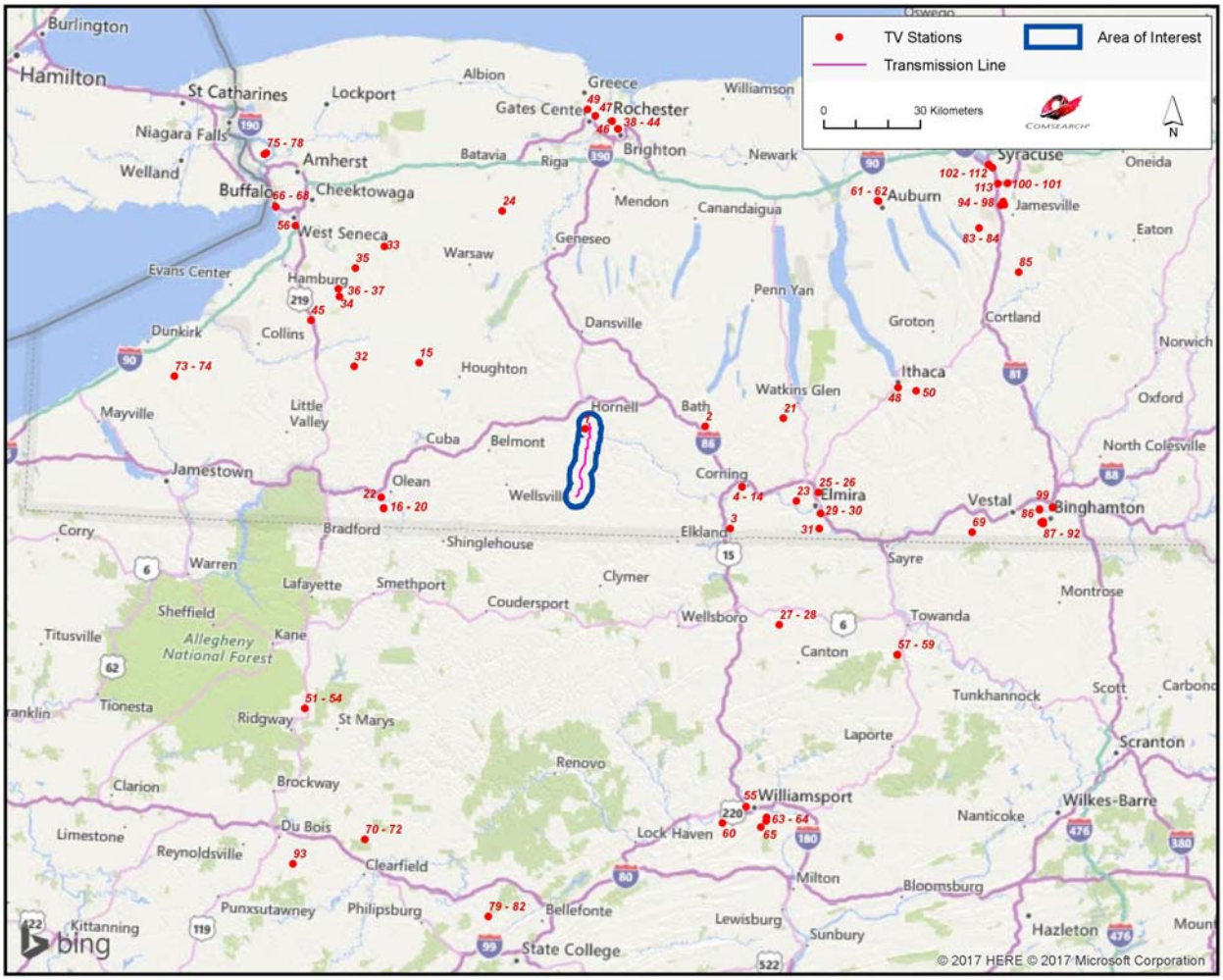

Figure 2: Plot of Off-Air TV Stations within 150 Kilometers of Transmission Line

TV stations at a distance of 100 kilometers or less are the most likely to provide off-air coverage to the project area and neighboring communities. These stations are listed in Table 1, below, and a plot depicting their locations is provided in Figure 3. There are a total of forty-nine database records for stations within approximately 100 kilometers of the transmission line. Of these stations, only thirty-two are currently licensed and operating, thirteen of which are low-power stations or translators. Translator stations are low-power stations that receive signals

[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 TV station's FCC license and governed by Comsearch's data license notification and agreement located at http://www.comsearch.com/files/data_license.pdf.

from distant broadcasters and retransmit the signal to a local audience. These stations serve local audiences and have limited range, which is a function of their transmit power and the height of their transmit antenna.

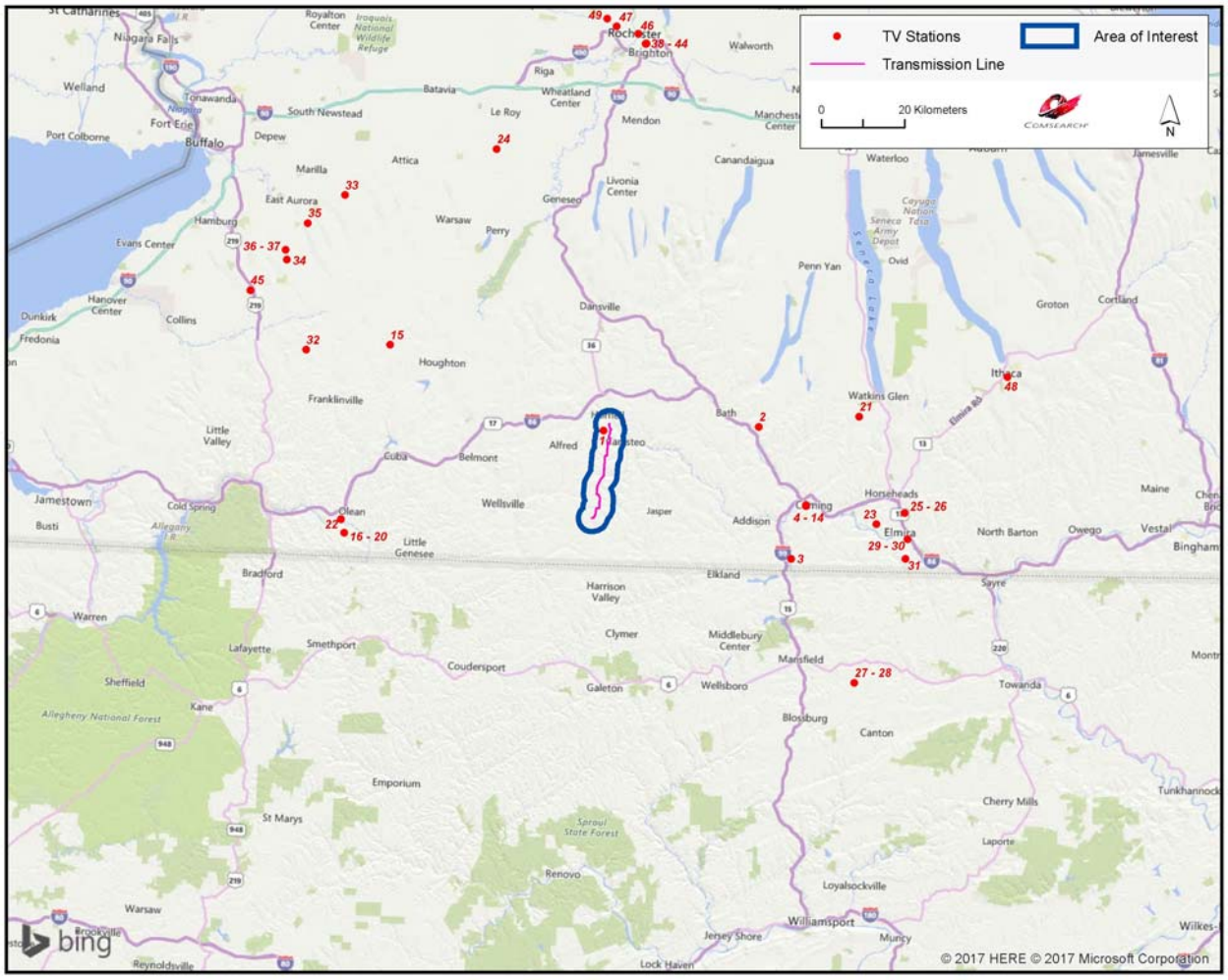

Figure 3: Plot of Off-Air TV Stations within 100 Kilometers of Transmission Line

ID	Call Sign	Status	Service[2]	Channel	Transmit ERP[3] (kW)	Latitude (NAD 27)	Longitude (NAD 27)	Distance to Nearest Tower (km)
1	W16BE-D	LIC	LD	16	0.277	42.292222	-77.674167	1.54
2	W20BL-D	LIC	LD	20	0.593	42.309167	-77.221389	35.62
3	W38FM-D	CP	LD	38	2.0	42.026250	-77.117361	47.81
4	W16DR-D	CP	LD	16	10.0	42.141944	-77.077778	49.30
5	W22ET-D	CP	LD	22	15.0	42.141944	-77.077778	49.30
6	WENY-TV	LIC	DT	36	75.0	42.141944	-77.077778	49.30
7	WJKP-LD	LIC	LD	39	0.314	42.141944	-77.077778	49.30
8	W41DB	LIC	TX	41	7.0	42.141944	-77.077778	49.30
9	W45DZ-D	CP	LD	45	5.0	42.141944	-77.077778	49.30
10	W46EZ-D	CP	LD	46	15.0	42.141944	-77.077778	49.30
11	W50ES-D	CP	LD	50	15.0	42.141944	-77.077778	49.30
12	NEW	APP	LD	51	15.0	42.141944	-77.077778	49.30
13	WSKA	LIC	DT	30	25.0	42.141592	-77.077531	49.33
14	WYDC	LIC	DT	48	7.6	42.141667	-77.077500	49.33
15	W30BW	CP MOD	LD	30	3.5	42.461603	-78.307486	56.04
16	W20AB	CP	TX	20	0.1	42.051028	-78.419694	59.69
17	W20AB	APP	TX	20	0.1	42.051028	-78.419694	59.69
18	W30BW	LIC	TX	30	5.9	42.051111	-78.419722	59.69
19	W30BW	CP	LD	30	1.0	42.051111	-78.419722	59.69
20	WVTT-CD	CP	DC	25	3.0	42.051111	-78.420278	59.73
21	-	CP	LD	40	0.1	42.336861	-76.927806	59.97
22	W20AB	LIC	TX	20	12.5	42.080556	-78.430556	60.35
23	WETM-TV	LIC	DT	18	45.0	42.106111	-76.871389	66.75
24	WPXJ-TV	LIC	DT	23	455.0	42.895000	-78.015556	71.63
25	W26BF	LIC	TX	26	1.09	42.130833	-76.789167	73.11
26	W26BF	APP	LD	26	15.0	42.130833	-76.788889	73.13
27	W20CP-D	LIC	LD	20	1.15	41.759444	-76.925278	74.40
28	W26CV-D	LIC	LD	26	0.098	41.759444	-76.925278	74.40
29	W59DG	CP	LD	32	15.0	42.074722	-76.779722	74.69
30	W59DG	LIC	TX	59	7.7	42.074722	-76.779722	74.69
31	W28DO-D	LIC	LD	28	0.76	42.031944	-76.783889	74.87
32	WVTT-CD	LIC	DC	34	15.0	42.443611	-78.553056	75.12
33	WNYO-TV	LIC	DT	49	198.0	42.782778	-78.457778	84.25

[2] Definitions of service and status codes:
DT – Digital television broadcast station
LD – Low-power digital television broadcast station
TX – Translator station
DC – Class A digital television broadcast station
DX – Digital auxiliary (backup) facility
LIC – Licensed and operational station
CP – Construction permit granted
CP MOD – Modification of construction permit
APP – Application for construction permit, not yet operational

[3] ERP = Transmit Effective Radiated Power

ID	Call Sign	Status	Service[2]	Channel	Transmit ERP[3] (kW)	Latitude (NAD 27)	Longitude (NAD 27)	Distance to Nearest Tower (km)
34	WKBW-TV	LIC	DT	38	358.0	42.637444	-78.619972	87.10
35	WGRZ	LIC	DT	33	480.0	42.718611	-78.563056	87.22
36	WIVB-TV	LIC	DT	39	790.0	42.659167	-78.625833	88.57
37	WIVB-TV	CP	DX	39	112.0	42.659167	-78.625833	88.57
38	WUHF	LIC	DT	28	320.0	43.134722	-77.585278	92.15
39	WAWW-LP	LIC	TX	20	25.8	43.135278	-77.585278	92.21
40	WHSH-LP	LIC	TX	36	16.0	43.135278	-77.585278	92.21
41	WHAM-TV	LIC	DT	13	18.0	43.135278	-77.584167	92.22
42	WXXI-TV	LIC	DT	16	236.6	43.135278	-77.584167	92.22
43	WHEC-TV	LIC	DT	10	18.1	43.135556	-77.583889	92.25
44	WROC-TV	LIC	DT	45	1000.0	43.135556	-77.583889	92.25
45	WBBZ-TV	LIC	DT	7	26.9	42.567778	-78.723333	92.19
46	WGCE-CD	APP	DC	25	15.0	43.156389	-77.608611	94.45
47	WBGT-CD	LIC	DC	46	15.0	43.170222	-77.673167	95.91
48	W16AX-D	LIC	DC	16	1.7	42.429694	-76.496917	96.41
49	WGCE-CD	LIC	DC	25	4.0	43.187222	-77.702500	97.86

Table 1: Off-Air TV Stations within 100 Kilometers of Transmission Line

3. Impact Assessment

Typically, transmission lines do not create reception problems for television signals. This includes transmission lines carrying high voltages such as those planned for the project described in this report. However, if the transmission lines are not well maintained, corona and arcing may occur at the insulators or conductor connectors, creating broad band noise. The broad band noise could cause interference to television receivers in residences near the transmission line project, particularly those residents whose homes are within approximately 500 feet of the transmission line. This distance is based on a worst-case scenario, which requires the presence of foul weather and takes into account the variable characteristics of the transmission line.

Based on a contour analysis of the licensed stations within 100 kilometers of the transmission line, it was determined that only eight of the full-power digital stations, identified below in Table 2, along with digital low-power stations W16BE-D and W20BL-D, have service contours that overlap with the transmission line project area and thus fall within the range of potential impact as described above.

ID	Call Sign	Status	Service[4]	Channel	Transmit ERP[5] (kW)	Latitude (NAD 27)	Longitude (NAD 27)	Distance to Nearest Tower (km)
1	W16BE-D	LIC	LD	16	0.277	42.292222	-77.674167	1.54
2	W20BL-D	LIC	LD	20	0.593	42.309167	-77.221389	35.62
6	WENY-TV	LIC	DT	36	75.0	42.141944	-77.077778	49.30
13	WSKA	LIC	DT	30	25.0	42.141592	-77.077531	49.33
14	WYDC	LIC	DT	48	7.6	42.141667	-77.077500	49.33
23	WETM-TV	LIC	DT	18	45.0	42.106111	-76.871389	66.75
24	WPXJ-TV	LIC	DT	23	455.0	42.895000	-78.015556	71.63
34	WKBW-TV	LIC	DT	38	358.0	42.637444	-78.619972	87.10
35	WGRZ	LIC	DT	33	480.0	42.718611	-78.563056	87.22
36	WIVB-TV	LIC	DT	39	790.0	42.659167	-78.625833	88.57

Table 2: Licensed Off-Air TV Stations Subject to Degradation

[4] Definitions of service and status codes:
DT – Digital television broadcast station
LD – Low-power digital television broadcast station
LIC – Licensed and operational station

[5] ERP = Transmit Effective Radiated Power

4. Recommendations

In order to prevent interference to television broadcast reception in the homes near the transmission line, there should be an effective quality control maintenance program in effect for the useful life period of the transmission line's operation. In the unlikely event that interference is observed in any of the TV service areas, a high-gain directional antenna may be employed, preferably outdoors, and oriented towards the signal origin in order to mitigate the interference.

Both cable service and direct broadcast satellite service will be unaffected by the presence of the transmission line and may be offered to those residents who can show that their off-air TV reception has been disrupted by the presence of the transmission line after it is installed.

5. Contact

For questions or information regarding the Off-Air TV Analysis, please contact:

Contact person:	Denise Finney
Title:	Account Manager
Company:	Comsearch
Address:	19700 Janelia Farm Blvd., Ashburn, VA 20147
Telephone:	703-726-5650
Fax:	703-726-5595
Email:	dfinney@comsearch.com
Web site:	www.comsearch.com

Appendix A

ID	Call Sign	Status	Service[6]	Channel	Transmit ERP[7] (kW)	Latitude (NAD 27)	Longitude (NAD 27)	Distance to Nearest Tower (km)
1	W16BE-D	LIC	LD	16	0.277	42.292222	-77.674167	1.54
2	W20BL-D	LIC	LD	20	0.593	42.309167	-77.221389	35.62
3	W38FM-D	CP	LD	38	2.0	42.026250	-77.117361	47.81
4	W16DR-D	CP	LD	16	10.0	42.141944	-77.077778	49.30
5	W22ET-D	CP	LD	22	15.0	42.141944	-77.077778	49.30
6	WENY-TV	LIC	DT	36	75.0	42.141944	-77.077778	49.30
7	WJKP-LD	LIC	LD	39	0.314	42.141944	-77.077778	49.30
8	W41DB	LIC	TX	41	7.0	42.141944	-77.077778	49.30
9	W45DZ-D	CP	LD	45	5.0	42.141944	-77.077778	49.30
10	W46EZ-D	CP	LD	46	15.0	42.141944	-77.077778	49.30
11	W50ES-D	CP	LD	50	15.0	42.141944	-77.077778	49.30
12	NEW	APP	LD	51	15.0	42.141944	-77.077778	49.30
13	WSKA	LIC	DT	30	25.0	42.141592	-77.077531	49.33
14	WYDC	LIC	DT	48	7.6	42.141667	-77.077500	49.33
15	W30BW	CP MOD	LD	30	3.5	42.461603	-78.307486	56.04
16	W20AB	CP	TX	20	0.1	42.051028	-78.419694	59.69
17	W20AB	APP	TX	20	0.1	42.051028	-78.419694	59.69
18	W30BW	LIC	TX	30	5.9	42.051111	-78.419722	59.69
19	W30BW	CP	LD	30	1.0	42.051111	-78.419722	59.69
20	WVTT-CD	CP	DC	25	3.0	42.051111	-78.420278	59.73
21	-	CP	LD	40	0.1	42.336861	-76.927806	59.97
22	W20AB	LIC	TX	20	12.5	42.080556	-78.430556	60.35
23	WETM-TV	LIC	DT	18	45.0	42.106111	-76.871389	66.75
24	WPXJ-TV	LIC	DT	23	455.0	42.895000	-78.015556	71.63
25	W26BF	LIC	TX	26	1.09	42.130833	-76.789167	73.11
26	W26BF	APP	LD	26	15.0	42.130833	-76.788889	73.13
27	W20CP-D	LIC	LD	20	1.15	41.759444	-76.925278	74.40

[6] Definitions of service and status codes:
TV – Analog television broadcast station
DT – Digital television broadcast station
DS – Digital special temporary authority (STA)
LP – Low power analog television broadcast station
LD – Low power digital television broadcast station
CA – Class A analog television broadcast station
DC – Class A digital television broadcast station
DX – Digital auxiliary (backup) facility
TX – Translator station
LIC – Licensed and operational station
CP – Construction permit granted
CP MOD – Modification of construction permit
APP – Application for construction permit, not yet operational
STA – Special transmit authorization, usually granted by FCC for temporary operation

[7] ERP = Transmit Effective Radiated Power

ID	Call Sign	Status	Service[6]	Channel	Transmit ERP[7] (kW)	Latitude (NAD 27)	Longitude (NAD 27)	Distance to Nearest Tower (km)
28	W26CV-D	LIC	LD	26	0.098	41.759444	-76.925278	74.40
29	W59DG	CP	LD	32	15.0	42.074722	-76.779722	74.69
30	W59DG	LIC	TX	59	7.7	42.074722	-76.779722	74.69
31	W28DO-D	LIC	LD	28	0.76	42.031944	-76.783889	74.87
32	WVTT-CD	LIC	DC	34	15.0	42.443611	-78.553056	75.12
33	WNYO-TV	LIC	DT	49	198.0	42.782778	-78.457778	84.25
34	WKBW-TV	LIC	DT	38	358.0	42.637444	-78.619972	87.10
35	WGRZ	LIC	DT	33	480.0	42.718611	-78.563056	87.22
36	WIVB-TV	LIC	DT	39	790.0	42.659167	-78.625833	88.57
37	WIVB-TV	CP	DX	39	112.0	42.659167	-78.625833	88.57
38	WUHF	LIC	DT	28	320.0	43.134722	-77.585278	92.15
39	WAWW-LP	LIC	TX	20	25.8	43.135278	-77.585278	92.21
40	WHSH-LP	LIC	TX	36	16.0	43.135278	-77.585278	92.21
41	WHAM-TV	LIC	DT	13	18.0	43.135278	-77.584167	92.22
42	WXXI-TV	LIC	DT	16	236.6	43.135278	-77.584167	92.22
43	WHEC-TV	LIC	DT	10	18.1	43.135556	-77.583889	92.25
44	WROC-TV	LIC	DT	45	1000.0	43.135556	-77.583889	92.25
45	WBBZ-TV	LIC	DT	7	26.9	42.567778	-78.723333	92.19
46	WGCE-CD	APP	DC	25	15.0	43.156389	-77.608611	94.45
47	WBGT-CD	LIC	DC	46	15.0	43.170222	-77.673167	95.91
48	W16AX-D	LIC	DC	16	1.7	42.429694	-76.496917	96.41
49	WGCE-CD	LIC	DC	25	4.0	43.187222	-77.702500	97.86
50	W07BJ	LIC	TX	7	0.016	42.420833	-76.429444	101.77
51	W17DU-D	CP	LD	17	1.0	41.482222	-78.683889	106.79
52	W19EI-D	CP	LD	19	1.0	41.482222	-78.683889	106.79
53	W21DO-D	CP	LD	21	1.0	41.482222	-78.683889	106.79
54	W28EO-D	CP	LD	28	1.0	41.482222	-78.683889	106.79
55	W20AD-D	LIC	LD	20	0.056	41.248056	-77.032778	109.85
56	WDTB-LD	LIC	TX	39	16.9	42.830556	-78.798333	110.13
57	W25AQ-D	LIC	LD	25	3.6	41.683056	-76.483056	110.73
58	W10CP-D	LIC	LD	10	0.066	41.681111	-76.481944	110.91
59	W15CO-D	LIC	LD	15	0.034	41.681111	-76.481944	110.91
60	WQMY	LIC	DT	29	50.0	41.200278	-77.120278	111.15
61	WNDR-LP	LIC	TX	6	1.45	42.951944	-76.586667	113.37
62	WNDR-LD	CP	LD	31	15.0	42.951389	-76.584722	113.46
63	W09DB-D	LIC	DC	9	0.75	41.218806	-76.957528	115.87
64	WVIA-TV	LIC	LD	51	0.121	41.208806	-76.958639	116.77
65	W33DZ-D	CP	LD	33	15.0	41.191389	-76.976944	117.64
66	WBXZ-LP	LIC	LD	17	15.0	42.880000	-78.876667	118.47
67	WDTB-LD	CP	LD	29	15.0	42.880000	-78.876667	118.47
68	WDTB-LD	LIC	LD	29	15.0	42.880056	-78.876639	118.47
69	W59DG	CP	LD	38	3.0	42.029167	-76.209444	122.16

ID	Call Sign	Status	Service[6]	Channel	Transmit ERP[7] (kW)	Latitude (NAD 27)	Longitude (NAD 27)	Distance to Nearest Tower (km)
70	WPSU-TV	LIC	DT	15	810.0	41.122222	-78.441611	125.08
71	WPSU-TV	LIC	DD	15	810.0	41.122222	-78.441667	125.08
72	WPSU-TV	LIC	DD	15	810.0	41.122222	-78.441667	125.08
73	WNYB	LIC	DT	26	243.0	42.393333	-79.228889	129.45
74	WNYB	APP	DT	26	450.0	42.393333	-79.228889	129.45
75	WNLO	LIC	DT	32	1000.0	43.030000	-78.920833	130.96
76	WNED-TV	LIC	DT	43	156.0	43.030000	-78.920833	130.96
77	WUTV	LIC	DT	14	1000.0	43.025556	-78.928611	131.16
78	WBNF-CD	LIC	DC	15	15.0	43.025556	-78.928611	131.16
79	WHVL-LD	CP	LD	27	15.0	40.919444	-77.974444	133.30
80	WHVL-LP	LIC	TX	29	11.7	40.919444	-77.974444	133.30
81	WHVL-LP	LIC	TX	29	11.7	40.919444	-77.974444	133.30
82	WHVL-LD	LIC	LD	27	15.0	40.919361	-77.974417	133.31
83	WSYT	LIC	DT	19	621.0	42.880556	-76.200000	135.56
84	WNYS-TV	LIC	DT	44	680.0	42.880556	-76.200000	135.56
85	WNYI	LIC	DT	20	110.0	42.758333	-76.046389	141.56
86	WBPN-LD	CP MOD	LD	23	0.08	42.093889	-75.957500	141.59
87	WBNG-TV	LIC	DT	7	34.0	42.058611	-75.951667	142.69
88	WSKG-TV	LIC	DT	42	50.0	42.061111	-75.945833	143.12
89	WBGH-CD	LIC	DC	20	0.04	42.060750	-75.943389	143.32
90	WIVT	LIC	DT	34	345.0	42.060833	-75.943333	143.32
91	WICZ-TV	LIC	DT	8	7.9	42.056111	-75.944167	143.35
92	WBPN-LP	LIC	TX	10	0.004	42.056111	-75.943889	143.37
93	WJAC-TV	LIC	LD	26	0.7	41.045278	-78.703056	144.05
94	WSTQ-LP	CP	LD	14	15.0	42.944889	-76.118750	144.78
95	WSTM-TV	LIC	DT	24	210.0	42.944944	-76.118778	144.78
96	WCNY-TV	LIC	DT	25	97.0	42.945000	-76.118611	144.80
97	WDSS-LD	LIC	LD	38	15.0	42.945833	-76.104722	145.84
98	WTVH	LIC	DT	47	500.0	42.955222	-76.109528	146.00
99	WXXW-LP	LIC	TX	6	0.016	42.100000	-75.908889	145.47
100	WBLZ-LP	LIC	TX	49	13.4	43.005278	-76.130000	147.35
101	WBLZ-LP	CP	LD	49	13.4	43.005278	-76.130000	147.35
102	WWLF-LP	CP	LD	32	2.5	43.058250	-76.166722	147.99
103	WONO-CD	LIC	DC	34	2.8	43.058250	-76.166722	147.99
104	WBLZ-LP	APP	LD	49	7.0	43.058250	-76.166722	147.99
105	WHSU-CD	LIC	DC	51	6.7	43.058250	-76.166722	147.99
106	WVOA-LP	LIC	TX	6	0.3	43.058333	-76.166667	148.00
107	WVOA-LP	CP	TX	6	3.0	43.058333	-76.166667	148.00
108	WNNY-LP	LIC	TX	13	3.0	43.058333	-76.166667	148.00
109	WSTQ-LP	LIC	TX	14	9.8	43.058333	-76.166667	148.00
110	WTVU-CD	LIC	DC	22	15.0	43.058333	-76.166667	148.00
111	WWLF-LP	LIC	TX	35	4.92	43.058333	-76.166667	148.00

ID	Call Sign	Status	Service[6]	Channel	Transmit ERP[7] (kW)	Latitude (NAD 27)	Longitude (NAD 27)	Distance to Nearest Tower (km)
112	W42EB-D	LIC	LD	42	12.3	43.050000	-76.151111	148.54
113	WIXT-CD	LIC	DC	40	1.0	43.006944	-76.093889	149.97

Table A: Off-Air TV Stations within 150 Kilometers of Transmission Line